

Feasibility Cluster Study for Generator Interconnection Requests (FCS-2016-002)

June 2016

Generator Interconnection Studies

1 Revision History

Date	Author	Change Description
06/30/2016	SPP	Report Issued (FCS-2016-002).

2 Executive Summary

Generator Interconnection customers have requested a Feasibility Study under the Generator Interconnection Procedures (GIP) in the Southwest Power Pool Open Access Transmission Tariff (OATT). The Interconnection Customers' requests have been clustered together for the following Feasibility Cluster Study (FCS) window which closed March 31, 2016. This Feasibility Cluster Study analyzes generation interconnection requests totaling approximately 2,888.4 MW which would be located within the transmission systems of Nebraska Public Power District (NPPD), Oklahoma Gas and Electric (OKGE), Sunflower Electric Power Corporation\Mid-Kansas Electric Company, LLC (SUNC\MKEC), Western Area Power Administration (WAPA). The generation interconnection requests have various proposed in-service dates¹. The generation interconnection requests included in this Feasibility Cluster Study are listed in Appendix A by queue number, amount, requested interconnection service, area, requested interconnection point, proposed interconnection point, and the requested in-service date.

Power flow analysis has indicated that for the power flow cases studied, 2,888.4 MW of nameplate generation may be interconnected with transmission system reinforcements within the AEPW, MKEC, NPPD, OKGE, and WERE transmission system. The need for reactive compensation in accordance with Order No. 661-A for wind farm interconnection requests will be evaluated in the Preliminary Interconnection System Impact Study (PISIS) and Definitive Interconnection System Impact Study (DISIS) based on the wind turbine manufacturer and type requested by the Customer. Dynamic stability studies performed as part of the PISIS and DISIS Cluster Studies will provide additional guidance for sizing of required reactive compensation. New Interconnection Requests will be subject to FERC Order 827 which requires reactive compensation to be dynamic (such as SVC or generator dynamic capability) over a certain range (+/-95%).

Within the study scope of the Feasibility Cluster Studies, two (2) mutually exclusive Point of Interconnections (primary or secondary POI) assumption analyses were conducted for GEN-2016-010 and GEN-2016-026. In additional, GEN-2016-018 and GEN-2016-019 Interconnection Service requests were evaluated mutually exclusive for transmission impacts per the request of the Interconnection Customer(s).

In no way does this study guarantee operation for all periods of time. This interconnection study identifies and assigns transmission reinforcements for Energy Resource Interconnection Service (ERIS) interconnection injection constraints and Network Resource Interconnection Service (NRIS) constraints if requested by the Customer. This interconnection study does not assign transmission reinforcements for all potential transmission constraints. It should be noted that although this study analyzed many of the most probable contingencies, it is not an all-inclusive list and cannot

¹ The generation interconnection requests in-service dates will need to be deferred based on the required lead time for the Network Upgrades necessary. The Interconnection Customer's that proceed to the Facility Study will be provided a new in-service date based on the competition of the Facility Study.

account for every operational situation. Because of this, it is likely that the Customer(s) may be required to reduce their generation output to 0 MW, also known as curtailment, under certain system conditions to allow system operators to maintain the reliability of the transmission network.

The total estimated minimum cost for interconnecting the FCS-2016-002 Interconnection Customers is estimated at \$218,811,083 as show in Appendix E and F. This total cost estimate is contingent upon higher queued customers paying for certain required network upgrades. Additionally, the total cost estimates are contingent on potential DISIS-2016-001 identified upgrades.

The one-line diagrams in Appendix D should be consulted for details of the alternate POIs. These costs do not include the Interconnection Customer Interconnection Facilities as defined by the SPP Open Access Transmission Tariff (OATT). This cost does not include the possible need for reactive compensation or additional interconnection facilities or network upgrades that may be identified through additional analyses performed in the PISIS and DISIS.

The powerflow results listed in this report were obtained by analyzing the 2,888.4 MW of the FCS-2016-002 Feasibility Study Interconnection Requests in addition to prior queued Interconnection Requests up to and including DISIS-2016-001. The DISIS-2016-001 study is not yet complete and full AC contingency analysis has not been performed for DISIS-2016-001. The full AC contingency and stability analysis for DISIS-2016-001 may result in additional upgrades and/or constraints that are assigned to the FCS-2016-002 Customers in this study. However, if any Interconnection Requests withdraw from the higher queued studies including DISIS-2016-001, then potential upgrades tentatively assigned to those Interconnection Requests may be assigned to the Interconnection Requests in this FCS-2016-002 study once FCS-2016-002 Interconnection Requests move forward into the next study phase.

Network Constraints listed in Appendix H are located in the local area of the new generation when this generation is injected throughout the SPP footprint for the Energy Resource Interconnection Service (ERIS) Interconnection Request. Certain interconnection requests have been studied for Network Resource Interconnection Service (NRIS). Those constraints are also listed in Appendix H. Additional Network constraints will have to be verified with a Transmission Service Request (TSR) and associated studies. With a defined source and sink in a TSR, this list of Network Constraints will be refined and expanded to account for all Network Upgrade requirements.

The required interconnection costs listed in Appendix E and F do not include all costs associated with the deliverability of the energy to final customers. These costs are determined by separate studies if the Customer submits a Transmission Service Request through SPP's Open Access Same Time Information System (OASIS) as required by Attachment Z1 of the SPP OATT.

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1 Introduction

Generator Interconnection customers have requested a Feasibility Study under the Generator Interconnection Procedures (GIP) in the Southwest Power Pool Open Access Transmission Tariff (OATT). The Interconnection Customers' requests have been clustered together for the following Feasibility Cluster Study (FCS) window which closed March 31, 2016. This Feasibility Cluster Study analyzes generation interconnection requests totaling approximately 2,888.4 MW which would be located within the transmission systems of Nebraska Public Power District (NPPD), Oklahoma Gas and Electric (OKGE), Sunflower Electric Power Corporation\Mid-Kansas Electric Company, LLC (SUNC\MKEC), Western Area Power Administration (WAPA). The generation interconnection requests have various proposed in-service dates². The generation interconnection requests included in this Feasibility Cluster Study are listed in Appendix A by queue number, amount, area, requested interconnection service, requested interconnection point, proposed interconnection point, and the requested in-service date.

Within the study scope of the Feasibility Cluster Studies, two (2) mutually exclusive Point of Interconnections (primary or secondary POI), assumption analyses were conducted for GEN-2016-010 and GEN-2016-026. In addition, GEN-2016-018 and GEN-2016-019 Interconnection Service requests were evaluated mutually exclusive for transmission impacts per the request of the Interconnection Customer(s).

The primary objective of this Feasibility Cluster Study is to identify the system constraints associated with connecting the generation to the area transmission system. The Feasibility and other subsequent Interconnection Studies are designed to identify attachment facilities, Network Upgrades and other Direct Assignment Facilities needed to accept power into the grid at each specific interconnection receipt point.

² The generator interconnection requests in-service dates will need to be deferred based on the required lead time for the Network Upgrades necessary. The Interconnection Customer's that proceed to the Facility Study will be provided a new in-service date based on the competition of the Facility Study.

2 Model Development (Study Assumptions)

2.1.1 Interconnection Requests Included in the Cluster

SPP has included all interconnection requests that submitted a Feasibility Study Agreement no later than March 31st, 2016 and were subsequently accepted by Southwest Power Pool under the terms of the Generator Interconnection Procedures (GIP) effective at the time of this study. The Interconnection Request(s) that are included in this study are listed in Appendix A.

2.1.2 Previously Queued Interconnection Requests

The previously queued Interconnection Requests included in this study are listed in Appendix B. In addition to the Base Case Upgrades, the previously queued requests and associated upgrades were assumed to be in-service and added to the Base Case models. These projects were dispatched as Energy Resources Interconnection Service (ERIS) and/or Network Resources Interconnection Service (NRIS) (in accordance with the individual Generator Interconnection Requests) with equal distribution across the SPP footprint.

2.2 Development of Base Cases

2.2.1 Power Flow

The 2015 model series Integrated Transmission Planning Near-Term models (used in the 2016 ITPNT) including the 2016 Winter Peak (16WP), 2017 Spring (17G), 2017 Summer Peak (17SP), 2020 Light Load, Summer and Winter peak (20L, 20SP, 20WP), and 2025 Summer Peak (25SP) scenario 0 cases were used for this study. After the cases were developed, each of the control areas' resources were then re-dispatched to account for the new generation requests using current dispatch orders.

2.2.2 Dynamic Stability

Dynamic stability analysis will be performed as part of the PISIS and DISIS Cluster Studies and may determine the need for additional Network Upgrades or Interconnection Facilities.

2.2.3 Short Circuit

Short circuit analysis will be performed as part of the PISIS and DISIS Cluster Studies and may determine the need for additional Network Upgrades or Interconnection Facilities.

2.2.4 Base Case Upgrades

The following facilities are part of the SPP Transmission Expansion Plan or the Balanced Portfolio or recently approved Priority Projects. These facilities, have an approved Notice to Construct (NTC), or are in construction stages and were assumed to be in-service at the time of dispatch and added to the base case models. The FCS-2016-002 Interconnection Customers have not been assigned cost for the below listed projects. The FCS-2016-002 Interconnection Customers Generation Facilities in-service dates may need to be delayed until the completion of the following upgrades. If for some

reason, construction on these projects is discontinued, additional restudies will be needed to determine the interconnection needs of the Feasibility Study Interconnection Customers.

- 2012 Integrated Transmission Plan (2012 ITP10) Projects
 - Woodward-Tatonga-Mathewson-Cimarron 345kV transmission line, scheduled for 2021 in-service³
 - Chisholm – Gracemont 345kV transmission line, and Chisholm 345/230kV transformer circuit #1, scheduled for 3/1/2018 in-service⁴
- 2015 Integrated Transmission Plan Near Term (2015 ITPNT) Projects
 - China Draw 115kV Reactive Power Support
 - 200Mvar Capacitive and 50Mvar Inductive Static Var Compensator (SVC)
 - Road Runner 115kV Reactive Power Support
 - 200Mvar Capacitive and 50Mvar Inductive Static Var Compensator (SVC)
 - Potash Junction – Intrepid – IMC #1 – Livingston Ridge 115kV rebuild
 - National Enrichment Plant – Targa – Cardinal 115kV circuit #1 rebuild
- Broken Bow – Ord – North Loup 115kV circuit #1⁵
- Gentleman – Thedford (Cherry County) – Holt County 345kV circuit #1 scheduled for 2018 in-service⁶
- Hoskins – Neligh East 345/115 kV Project⁷
 - Neligh East 345/115 kV substation and transformer
 - Neligh East Area 115 kV upgrades to support new station
 - Hoskins – Neligh East 345 kV circuit #1
- High Priority Incremental Loads (HPILs) Projects⁸:
 - TUCO Interchange – Yoakum – Hobbs Interchange 345/230 kV Project
 - TUCO Interchange – Yoakum – Hobbs Interchange 345 kV circuit #1 and associated terminal equipment upgrades
 - Hobbs 345/230/13 kV transformer circuit #1
 - Yoakum 345/230/13 kV transformer circuit #1
 - Battle Axe – Road Runner 115 kV circuit #1
 - Chaves County – Price – CV Pines – Capitan 115 kV circuit #1
 - China Draw – Yeso Hills 115 kV circuit #1
 - Dollarhide – Toboso Flats 115 kV circuit #1
 - Hobbs Interchange – Kiowa 345 kV circuit #1
 - Kiowa – North Loving – China Draw 345/115 kV Projects

³ SPP Notification to Construct (NTC) 200223

⁴ SPP Notification to Construct (NTC) 200240 and 200255

⁵ SPP Notification to Construct (NTC) 200294

⁶ SPP Notification to Construct (NTC) 200220

⁷ SPP Regional Reliability 2012 ITP 10 Project Per SPP-NTC-200220

⁸ Per Network Upgrades assigned in High Priority Incremental Loads (HPILs) study, Including Direct Assigned Upgrades, Projects in SPP-NTC-200256 and SPP-NTC-200283.

- Kiowa – North Loving – China Draw circuit #1 and associated terminal equipment upgrades
 - China Draw 345/115/13 kV transformer circuit #1
 - North Loving 345/115/13 kV transformer circuit #1
 - Kiowa – Road Runner 345/230/115 kV Projects
 - Kiowa 345/230 kV transformer circuit #1
 - Road Runner 345/115/13 kV transformer circuit #1
 - Livingston Ridge – Sage Brush – Lagarto – Cardinal 115 kV circuit #1
 - North Loving – South Loving 115 kV circuit #1
 - Ponderosa – Ponderosa Tap 115 kV circuit #1
 - Potash 230/115/13kV Transformer circuit #1 replacement
- Nebraska City – Mullin Creek – Sibley 345kV circuit #1 build, scheduled for 12/31/2016 in-service⁹
- Viola 345/138kV Project¹⁰
 - Clearwater – Viola 138kV circuit #1
 - Gill – Viola 138kV circuit #1
 - Sumner County – Viola 138kV circuit #1
 - Viola 345/138/13kV transformer circuit #1

2.2.5 Contingent Upgrades

The following facilities do not yet have approval. These facilities have been assigned to higher queued Interconnection Customers. These facilities have been included in the models for the FCS-2016-002 study and are assumed to be in service. This list may not be all inclusive. The FCS-2016-002 Interconnection Customers at this time do not have responsibility for these facilities but may later be assigned the cost of these facilities if higher queued customers terminate their GIA or withdraw from the interconnection queue. The FCS-2016-002 Interconnection Customer Generation Facilities in-service dates may need to be delayed until the completion of the following upgrade(s).

- Upgrades assigned to DISIS-2010-002 Interconnection Customers:
 - Twin Church – Dixon County 230 kV circuit #1, rerate (320 MVA)
 - Buckner – Spearville 345 kV, terminal equipment
- Upgrades assigned to DISIS-2011-001 Interconnection Customers:
 - Hoskins – Dixon County – Twin Church 230 kV circuit #1, conductor clearance increase
 - (NRIS only) Woodward District EHV Phase Shifting Transformer
- Upgrades assigned to DISIS-2012-002 Interconnection Customers:
 - Lake Creek – Lone Wolf 69 kV circuit #1, reset CT
- Upgrades assigned to DISIS-2013-002 Interconnection Customers:

⁹ SPP Notification to Construct (NTC) 20097 and 20098

¹⁰ SPP Notification to Construct (NTC) 200228 and 200296

- Battle Creek – County Line – Neligh East 115kV circuit #1, rebuild
- Upgrades assigned to DISIS-2014-002 Interconnection Customers:
 - Arnold – Ransom 115kV circuit #1, terminal equipment replacement
 - Tolk – Plant X 230kV circuit #1 and circuit #2, re-conductor
 - Tuco 345/230/13kV Transformer circuit #1, replacement
- Upgrades assigned to DISIS-2015-001 Interconnection Customers:
 - Altus SW – Navajo – Snyder 69kV circuit #1, rebuild
 - Anadarko – Sequoyah – Cornville Tap 138kV circuit #1, rebuild
 - Beach – GEN-2010-048 Tap circuit #1, replace terminal equipment
 - Cimarron River Tap – Kismet – Cudahy – Crooked Creek 115kV circuit #1, rebuild
 - Cornville Tap – Naples Tap – Payne 138kV circuit #1, rebuild
 - Greenburg – Shooting Star 115kV circuit #1, rebuild
 - Kress Interchange – Swisher 115kV circuit #1, replace terminal equipment
 - Nichols – Grapevine – Wheeler 230kV circuit #1, replace terminal equipment
 - Oklaunion 345kV Reactive Power Support
 - Install two (2) -130Mvar Capacitor Bank(s) at Oklaunion
 - Stateline – Sweetwater 230kV circuit #1, replace terminal equipment
 - (NRIS Only) Bushland – Potter County 230kV circuit #1, replace terminal equipment
 - (NRIS Only) Carlisle – LP-Doug 115kV circuit #1, replace terminal equipment
 - (NRIS Only) Carlisle 230/115/13kV Transformer circuit #1, replacement
 - (NRIS Only) Cox Interchange – Hale County 115kV circuit #1, rebuild
 - (NRIS Only) Crawfish Draw (TUCO 2) 230/115/13kV Transformer circuit #1, build
 - (NRIS Only) Kress Interchange – Swisher 115kV circuit #2, build
 - (NRIS Only) Potter County Interchange 345/230/13kV Transformer circuit #2, build
 - (NRIS Only) Renfrow – Renfrow 138kV circuit #1, rebuild
 - (NRIS Only) Sundown 230/115/13kV Transformer circuit #1, replacement
 - (NRIS Only) Crawfish Draw Substation 345/230kV
 - Build new 345/230kV substation along TUCO – Border 345kV and TUCO – Swisher 230kV. Tie in and Terminate TUCO 345kV, Border 345kV, TUCO 230kV, and Swisher 230kV at TUCO 2.
 - Build 345/230/13kV transformer circuit #1
 - (NRIS Only) Crawfish Draw – TUCO Interchange 230kV circuit #1, replace terminal equipment
 - (NRIS Only) TUCO Interchange – Jones 230kV circuit #1, replace terminal equipment
 - (NRIS Only) Wolfforth – Terry County 115kV circuit #1, replace terminal equipment
 - (NRIS Only) Wolfforth – 230/115/13kV Transformer circuit #1, replacement
- Upgrades assigned to DISIS-2015-002 Interconnection Customers:
 - For the list of Network Upgrade(s) assigned to DISIS-2015-002-1, Please refer to DISIS-2015-002-1 posting currently scheduled for August 1, 2016.
- Upgrades assigned to DISIS-2016-001 Interconnection Customers:
 - DISIS-2016-001 constraints were identified and network upgrades required for mitigation of constraints will be included in the DISIS-2016-001 study posting report
 - DISIS-2016-001 constraints with FCS-2016-002 impacts are listed below in 2.2.5.1:

2.2.5.1 Contingent DISIS-2016-001 Upgrades

The following facilities are not yet approved, but are currently identified as being assignable to DISIS-2016-002 Interconnection Requests. FCS-2016-002 Interconnection Requests have been identified as impacting these facilities but have not been identified as being required for additional reinforcement beyond what is needed from DISIS-2016-001 Interconnection Requests. These facilities upgrades were considered to be placed in service and accounted for in the models for the FCS-2016-002 study. This list may not be all inclusive. The FCS-2016-002 Interconnection Customers at this time do not have responsibility for these facilities but may later be assigned the cost of these facilities if higher queued customers terminate their GIA or withdraw from the interconnection queue. The FCS-2016-002 Interconnection Customer Generation Facilities in-service dates may need to be delayed until the completion of the following upgrade(s).

- Bison - Hetinger 230kV circuit #1
- GEN-2016-012 Tap – Lacygne 345kV circuit #1
- GEN-2016-032 Tap – Cottonwood 138kV circuit #1
- Mathewson – GEN-2015-063 Tap – Woodring - Hunter 345kV circuit #1
- Viola – Wichita 345kV circuit #1
- Viola 345/138/13kV transformer circuit #1

2.2.6 Potential Upgrades Not in the Base Cases

Any potential upgrade(s) that do not have a Notification to Construct (NTC) have not been included in the base case(s). These upgrade(s) include any identified in the SPP Extra-High Voltage (EHV) overlay plan, or any other SPP planning study other than the upgrades listed above in the previous section.

2.2.7 Regional Groupings

The Interconnection Request(s) listed in Appendix A are grouped together into seven (7) active regional groups based on geographical and electrical impacts. These groupings are shown in Appendix C.

2.3 Development of Analysis Cases

2.3.1 Power Flow

For Variable Energy Resources (VER) (solar/wind) in each power flow case, Energy Resource Interconnection Service (ERIS), is evaluated for the generating plants within a geographical area of the interconnection request(s) for the VERs dispatched at 100% nameplate of maximum generation. The VERs in the remote areas are dispatched at 20% nameplate of maximum generation. These projects are dispatched across the SPP footprint using load factor ratios.

Peaking units are not dispatched in the 2017 spring, or in the “High VER” summer and winter peaks. To study peaking units’ impacts, the 2016 winter peak, 2017 summer peak, 2020 summer and winter peaks, and 2025 summer peak models are developed with peaking units dispatched at 100%

of the nameplate rating and VERs dispatched at 20% of the nameplate rating. Each interconnection request is also modeled separately at 100% nameplate for certain analyses.

All generators (VER and peaking) that requested Network Resource Interconnection Service (NRIS) are dispatched in an additional analysis into the interconnecting Transmission Owner's (T.O.) area at 100% nameplate with Energy Resource Interconnection Service (ERIS) only requests at 80% nameplate. This method allows for identification of network constraints that are common between regional groupings to have affecting requests share the mitigating upgrade costs throughout the cluster.

2.3.2 Dynamic Stability

Dynamic stability analysis will be performed as part of the PISIS and DISIS Cluster Studies and may determine the need for additional Network Upgrades or Interconnection Facilities.

2.3.3 Short Circuit

Short circuit analysis will be performed as part of the PISIS and DISIS Cluster Studies and may determine the need for additional Network Upgrades or Interconnection Facilities.

3 Identification of Network Constraints

3.1.1 Thermal Overloads

Network constraints are found by using PSS/E MUST First Contingency Incremental Transfer Capability (FCITC) analysis on the entire cluster grouping dispatched at the various levels previously mentioned.

For Energy Resource Interconnection Service (ERIS), thermal overloads are determined for system intact (n-0) (greater than 100% of Rate A - normal) and for contingency (n-1) (greater than 100% of Rate B – emergency) conditions.

The overloads are then screened to determine which of generator interconnection requests have at least

- 3% Distribution Factor (DF) for system intact conditions (n-0),
- 20% DF upon outage based conditions (n-1),
- or 3% DF on contingent elements that resulted in a non-converged solution.

Appropriate transmission support is then determined to mitigate the constraints.

Interconnection Requests that requested Network Resource Interconnection Service (NRIS) are also studied in a separate NRIS analysis to determine if any constraint measured greater than or equal to a 3% DF. If so, these constraints are also considered for transmission reinforcement under NRIS.

3.1.2 Voltage

Steady State Voltage analysis is performed as part of the PISIS and DISIS Cluster Studies and will determine whether additional reactive compensation devices (capacitor or reactor banks and/or SVCs) are required on the Transmission System Monitored facilities and transmission reinforcement criteria for this analysis will be provided during the PISIS and/or DISIS report

3.1.3 Dynamic Stability

Dynamic stability studies performed as part of the PISIS and DISIS Cluster Studies will analyze system stability and determine whether wind farms and solar facilities are compliant with low voltage ride through requirements (FERC Order #661-A). Stability issues are required to be mitigated with transmission reinforcement under ERIS in the DISIS and/or PISIS study. Generators that fail to meet low voltage ride-through requirements or SPP's stability criteria for damping or dynamic voltage recovery are assigned upgrades such that these requirements can be met.

3.1.4 Upgrades Assigned

Thermal overloads that require transmission support to mitigate are discussed in Section 8 and listed in Appendix G. All of these upgrades are cost assigned in Appendix E and Appendix F.

Other network constraints not requiring transmission reinforcements are shown in Appendix H. With a defined source and sink in a Transmission Service Request, this list of network constraints can be refined and expanded to account for all Network Upgrade requirements for firm transmission service. Additional constraints identified by multi-element contingencies are listed in Appendix I.

In no way does the list of constraints in Appendix G identify all potential constraints that guarantee operation for all periods of time. It should be noted that although this study analyzed many of the most probable contingencies, it is not an all-inclusive list and cannot account for every operational situation. Because of this, it is likely that the Customer(s) may be required to reduce their generation output to 0 MW, also known as curtailment, under certain system conditions to allow system operators to maintain the reliability of the transmission network.

3.1.5 Identification of Electrically Isolated Groups and Requests

From the FCITC analysis, it may be determined that some of the regional groups had no common impacts with the other groups. However, this determination may change as the Interconnection Customers depending upon the time at which the interconnection customers enter either the Preliminary Interconnection System Impact Study (PISIS) an/or the Definitive Interconnection System Impact Study (DISIS).

4 Determination of Cost Allocated Network Upgrades

Cost Allocated Network Upgrades of Variable Energy Resources (VER) (solar/wind) generation interconnection requests are determined using the 2017 spring model. Cost Allocated Network Upgrades of peaking units is determined using the 2020 summer peak model. A PSS/E and MUST sensitivity analysis is performed to determine the Distribution Factors (DF), a distribution factor with no contingency that each generation interconnection request has on each new upgrade. The impact each generation interconnection request has on each upgrade project is weighted by the size of each request. Finally the costs due by each request for a particular project are then determined by allocating the portion of each request's impact over the impact of all affecting requests.

For example, assume that there are three Generation Interconnection requests, X, Y, and Z that are responsible for the costs of Upgrade Project '1'. Given that their respective PTDF for the project have been determined, the cost allocation for Generation Interconnection request 'X' for Upgrade Project 1 is found by the following set of steps and formulas:

- Determine an Impact Factor on a given project for all responsible GI requests:

$$\text{Request X Impact Factor on Upgrade Project 1} = \text{DF}(\%)(X) * \text{MW}(X) = X1$$

$$\text{Request Y Impact Factor on Upgrade Project 1} = \text{DF}(\%)(Y) * \text{MW}(Y) = Y1$$

$$\text{Request Z Impact Factor on Upgrade Project 1} = \text{DF}(\%)(Z) * \text{MW}(Z) = Z1$$

- Determine each request's Allocation of Cost for that particular project:

$$\text{Request X's Project 1 Cost Allocation (\$)} = \frac{\text{Network Upgrade Project 1 Cost(\$)} * X1}{X1 + Y1 + Z1}$$

- Repeat previous for each responsible GI request for each Project

The cost allocation of each needed Network Upgrade is determined by the size of each request and its impact on the given project. This allows for the most efficient and reasonable mechanism for sharing the costs of upgrades.

4.1.1 Credits/Compensation for Amounts Advanced for Network Upgrades

Interconnection Customer shall be entitled to either credits or potentially Long Term Congestion Rights (LTCR), otherwise known as compensation, in accordance with Attachment Z2 of the SPP Tariff for any Network Upgrades, including any tax gross-up or any other tax-related payments associated with the Network Upgrades, and not refunded to the Interconnection Customer.

5 Required Interconnection Facilities

The Interconnection Customers requested interconnection within the transmission systems of Nebraska Public Power District (NPPD), Oklahoma Gas and Electric (OKGE), Sunflower Electric Power Corporation\Mid-Kansas Electric Company, LLC (SUNC\MKEC), Western Area Power Administration (WAPA).

The requirement to interconnect the 2,888.4 MW of generation into the existing and proposed transmission systems in the affected areas of the SPP transmission footprint consist of the necessary cost allocated shared facilities listed in Appendices E and F. The total estimated minimum cost for interconnecting the FCS-2016-002 Interconnection Customers is estimated at \$218,811,083 as shown in Appendix E and F. This total cost estimate is contingent upon higher queued customers paying for certain required network upgrades.

Appendices E and F also include Interconnection Facilities specific to each generation interconnection request. GEN-2016-010 and GEN-2016-026 requested additional analyses for alternate Points of Interconnection (POIs). The one-line diagrams in Appendix D should be consulted for details of the alternate POIs. Separate cost allocations are included in this report for the alternate Points of Interconnection.

For an explanation of how required Network Upgrades and Interconnection Facilities were determined, refer to the section on “Identification of Network Constraints” above.

A preliminary one-line drawing for each generation interconnection request is listed in Appendix D.

5.1.1 Facilities Analysis

Not applicable to the Feasibility Cluster Study (FCS) and will be conducted during the DISIS.

5.1.2 Environmental Review

For Interconnection Requests that result in an interconnection to, or modification to, the transmission facilities of the Western-UGP, a National Environmental Policy Act (NEPA) Environmental Review will be required. The Interconnection Customer will be required to execute and Environmental Review Agreement per Section 8.6.1 of the GIP.

6 Affected Systems Coordination

Impacts to affected systems will be coordinated with the Affected System operators if the Interconnection Request(s) enter into the Definitive Interconnection System Impact Study Queue. Constraints identified to affected system during this analysis are in Appendix H-AS.

7 Power Flow Analysis

7.1.1 Power Flow Analysis Methodology

The Direct Current (DC) FCITC function of PSS® MUST was used to simulate single element and special (i.e., breaker-to-breaker, multi-element, etc.) contingencies in portions or all of the modeled control areas of SPP, as well as, other control areas external to SPP and the resulting scenarios analyzed. This satisfies the “more probable” contingency testing criteria mandated by NERC and the SPP criteria.

7.1.2 Power Flow Analysis

A power flow analysis is conducted for each Interconnection Customer’s facility using modified versions of the 2016 winter, 2017 spring and summer, 2020 light load, summer and winter, and 2025 summer peaks. The output of the Interconnection Customer’s facility is offset in each model by a reduction in output of existing online SPP generation. This method allows the request to be studied as an Energy Resource Interconnection Service request (ERIS). Certain requests that are also pursuing Network Resource Interconnection Service (NRIS) have an additional analysis conducted for displacing resources in the interconnecting Transmission Owner’s balancing area.

This analysis was conducted assuming that previous queued requests in the immediate area of these interconnect requests were in-service. The analysis of the each Customer’s project indicates that criteria violations will occur on the SPS transmission system under steady state and contingency conditions in the peak seasons.

The need for reactive compensation will be determined during the Interconnection System Impact Study. The need for reactive compensation will be based on the Interconnection Customer’s choice of wind turbine make and manufacturer. Dynamic Stability studies performed as part of the System Impact Cluster Study will provide additional guidance as to whether the reactive compensation can be static or a portion must be dynamic (such as a SVC or STATCOM). It is possible that an SVC or STATCOM device will be required at the Customer facility because of FERC Order 661-A Low Voltage Ride-Through Provisions (LVRT) which went into effect January 1, 2006. FERC Order 661-A orders that wind farms stay on-line for 3-phase faults at the point of interconnection even if that requires the installation of a SVC or STATCOM device. SPP is still evaluating the impacts of recent FERC Order 827 to the reactive compensation needs of wind farms.

8 Power Flow Results

8.1 Cluster Group 1 (Woodward Area)

In addition to the 7,644.3 MW of previously queued generation in the area, 0.0 MW of new interconnection service was studied. No new constraints were found in this area.

8.2 Cluster Group 2 (Hitchland Area)

In addition to the 4,421.8 MW of previously queued generation in the area, 0.0 MW of new interconnection service was studied. No new constraints were found in this area.

8.3 Cluster Group 3 (Spearville Area)

In addition to the 4,073.0 MW of previously queued generation in the area, 134.0 MW of new interconnection service was studied. Due to the electrical location of GEN-2015-010’s secondary Point of Interconnection of Harper 138kV, GEN-2015-010 secondary POI was analyzed in Group 03. DC analysis thermal overloads were observed for Harper – Milan Tap – Clearwater – Gill Energy Center West 138kV transmission circuit during system intact and contingency conditions. The mitigation for the Harper – Milan Tap – Clearwater – Gill Energy Center West 138kV transmission circuit overload will require the Harper – Milan Tap – Clearwater 138kv portion of the transmission circuit to be rebuild or re-conductor. Clearwater – Gill Energy Center West 138kV overload is alleviated by the Viola Project being placed in-service.

Table 1: Group 3 Power Flow Analysis (GEN-2016-010 @ Harper 138kV)

MONITORED ELEMENT	ERIS Constraints		CONTINGENCY
	RATE (MVA)	TC% LOADING (%)	
CLEARWATER - GILL ENERGY CENTER WEST 138KV CKT 1	136.2	120.6392	System Intact
CLEARWATER - GILL ENERGY CENTER WEST 138KV CKT 1	136.2	141.6493	G1524G1525 345.00 - THISTLE7 345.00 345KV CKT 2
CLEARWATER - MILAN TAP 138KV CKT 1	95.9	179.2602	System Intact
CLEARWATER - MILAN TAP 138KV CKT 1	104.3	211.9795	P12:138:ITCGP:FLATRIDGE-THISTLE::
HARPER - MILAN TAP 138KV CKT 1	135.3	143.7624	System Intact
HARPER - MILAN TAP 138KV CKT 1	140.2	159.1487	G1524G1525 345.00 - THISTLE7 345.00 345KV CKT 2
	Mitigation		Viola Project and rebuild Harper – Milan Tap – Clearwater 138kV circuit #1

Group 3 current study requests did not request to be studied as NRIS, therefore no additional NRIS analysis was conducted for Group 03 current study requests.

8.4 Cluster Group 4 (Northwest Kansas Area)

In addition to the 2,206.0 MW of previously queued generation in the area, 0.0 MW of new interconnection service was studied.

8.5 Cluster Group 6 (South Texas Panhandle/New Mexico) Area

In addition to the 7,530.07 MW of previously queued generation in the area, 0.0 MW of new interconnection service was studied. No new constraints were found in this area.

8.6 Cluster Group 7 (Southwestern Oklahoma Area)

In addition to the 2,687.4 MW of previously queued generation in the area, 0.0 MW of new interconnection service was studied. No new constraints were found in this area.

8.7 Cluster Group 8 (North Oklahoma/South Central Kansas Area)

In addition to the 9,526.16 MW of previously queued generation in the area, 208.0 MW of new interconnection service was studied.

The following facilities are not yet approved, but are currently identified as being assignable to DISIS-2016-002 Interconnection Requests. FCS-2016-002 Interconnection Requests have been identified as impacting these facilities but have not been identified as being required for additional reinforcement beyond what is needed from DISIS-2016-001 Interconnection Requests. These facilities upgrades were considered to be placed in service and accounted for in the models for the FCS-2016-002 study. This list may not be all inclusive. The FCS-2016-002 Interconnection Customers at this time do not have responsibility for these facilities but may later be assigned the cost of these facilities if higher queued customers terminate their GIA or withdraw from the interconnection queue. The FCS-2016-002 Interconnection Customer Generation Facilities in-service dates may need to be delayed until the completion of the following upgrade(s).

- GEN-2016-012 Tap – Lacygne 345kV circuit #1
- GEN-2016-032 – Cottonwood 138kV circuit #1
- Mathewson – GEN-2015-063 Tap – Woodring - Hunter 345kV circuit #1
- Viola – Wichita 345kV circuit #1
- Viola 345/138/13kV transformer circuit #1

As this time, no additional incremental upgrades are identified for GEN-2016-010 (Viola Point of Interconnection) and GEN-2016-033 after the potential DISIS-2016-001 transmission reinforcement mitigations is placed in-service. Please note, these results are based on DC analysis only and can be subject to change during the AC contingency analysis and accompanying dynamic stability analysis performed during the PISIS or DISIS study.

Table 2: Group 8 Power Flow Analysis

MONITORED ELEMENT	ERIS Constraints		CONTINGENCY
	RATE (MVA)	TC% LOADING (%)	
G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	954.6	167.5214	NORTHWEST - SPRING CREEK 345KV CKT 1
G15063_T 345.00 - WOODRING 345KV CKT 1	956	136.6694	NORTHWEST - SPRING CREEK 345KV CKT 1
HUNTERS7 345.00 - WOODRING 345KV CKT 1	1194.9	109.5443	VIOLA 7 345.00 - WICHITA 345KV CKT 1
VIOLA 7 345.00 - WICHITA 345KV CKT 1	1075.2	118.2347	HUNTERS7 345.00 - WOODRING 345KV CKT 1
VIOLA 7 345.00 (VIOLA 1X) 345/138/13.8KV TRANSFORMER CKT 1	492.4	119.0827	VIOLA 7 345.00 - WICHITA 345KV CKT 1
	Mitigation		Potential transmission reinforcements mitigations by DISIS-2016-001 Interconnection Customer(s)
EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	716.2	102.3372	System Intact
	Mitigation		DISIS-2015-002-1 Upgrade(s)

No additional incremental upgrade mitigations were identified by the NRIS analysis, however NRIS service type could be depended on potential DISIS-2016-001 assigned upgrades.

8.8 Cluster Group 9 (Nebraska Area)

In addition to the 4,966.3 MW of previously queued generation in the area, 120.0 MW of new interconnection service was studied. GEN-2016-026 requested a primary and secondary Point of Interconnection (POI), therefore two mutually exclusive analyses were conducted. The GEN-2016-026 analysis for the POI at Callaway 115kV, ERS analysis determined constraints on Maxwell - Callaway – Broken Bow – Loup City 115kV transmission circuits during contingency. Transmission reinforcement mitigations including advancing the 2014 Integrated Transmission Plan – Near Term (2014 ITPNT) Broken Bow – Ord – North Loup 115kV project per SPP-NTC-200294 and building new outlet from Callaway to Stapleton 115kV. The constraints for this POI can be shown in following table.

Table 3: Group 9 Power Flow Analysis (GEN-2016-026 @ Callaway 115kV)

ERIS Constraints			
MONITORED ELEMENT	RATE (MVA)	TC% LOADING (%)	CONTINGENCY
BROKEN BOW - CALLAWAY 115KV CKT 1	136.8	111.2937	CALLAWAY - MAXWELL 115KV CKT 1
BROKEN BOW - LOUP CITY 115KV CKT 1	118.1	127.1541	BROKEN BOW - CROOKED CREEK 115KV CKT 1
CALLAWAY - MAXWELL 115KV CKT 1	139.7	108.9834	BROKEN BOW - CALLAWAY 115KV CKT 1
	Mitigation		Broken Bow – Ord – Loup City 115kV Project and build Callaway – Stapleton 115kV circuit #1.

For the analysis of GEN-2016-026 with the POI at Broken Bow 115kV, ERS analysis determined constraints on Crooked Creek – Broken Bow – Loup City 115kV transmission circuits and Crooked Creek 230/115/13kV transformer during contingency. Transmission reinforcement mitigations including advancing the 2014 Integrated Transmission Plan – Near Term (2014 ITPNT) Broken Bow – Ord – North Loup 115kV project per SPP-NTC-200294 and building new outlet from Callaway to Stapleton 115kV. The constraints for this POI can be shown in following table.

Table 4: Group 9 Power Flow Analysis (GEN-2016-026 @ Broken Bow 115kV)

ERIS Constraints			
MONITORED ELEMENT	RATE (MVA)	TC% LOADING (%)	CONTINGENCY
BROKEN BOW - CROOKED CREEK 115KV CKT 1	159.8	109.4671	BROKEN BOW - LOUP CITY 115KV CKT 1
BROKEN BOW - LOUP CITY 115KV CKT 1	118.1	143.4707	BROKEN BOW - CROOKED CREEK 115KV CKT 1
CROOKED CREEK (CR.CREEK T1) 230/115/13.8KV TRANSFORMER CKT 1	159.5	108.7325	BROKEN BOW - LOUP CITY 115KV CKT 1
	Mitigation		Broken Bow – Ord – Loup City 115kV Project and build Callaway – Stapleton 115kV circuit #1.

Group 9 current study requests did not request to be studied as NRIS, therefore no NRIS analysis was conducted for Group 9 current study requests.

8.9 Cluster Group 10 (Southeast Oklahoma/Northeast Texas Area)

In addition to the 0.0 MW of previously queued generation in the area, 0.0 MW of new interconnection service was studied. No new constraints were found in this area.

8.10 Cluster Group 12 (Northwest Arkansas Area)

In addition to the 30.0 MW of previously queued generation in the area, 0.0 MW of new interconnection service was studied. No new constraints were found in this area.

8.11 Cluster Group 13 (Northeast Kansas/Northwest Missouri Area)

In addition to the 808.7 MW of previously queued generation in the area, 0.0 MW of new interconnection service was studied. No new constraints were found in this area.

8.12 Cluster Group 14 (South Central Oklahoma Area)

In addition to the 1,616.0 MW of previously queued generation in the area, 2,103.0 MW of new interconnection service was studied. At the request of the Interconnection Customer(s), GEN-2016-018 and GEN-2016-019 were analyzed mutually exclusive. At this time, GEN-2016-018 ERIS and NRIS analysis did not require additional transmission reinforcements. Constraints on the Clayton – Sardis – Enogex Wilburton 138kV transmission circuit found during the analysis for the GEN-2016-018 NRIS can be mitigated with approved upgrades from the 2015 ITP 10 Study

Table 5: Group 14 Power Flow Analysis (GEN-2016-018)

ERIS Constraints			
MONITORED ELEMENT	RATE (MVA)	TC% LOADING (%)	CONTINGENCY
Currently, no additional constraints			
	Mitigation		

NRIS Constraints			
MONITORED ELEMENT	RATE (MVA)	TC% LOADING (%)	CONTINGENCY
CLAYTON - SARDIS 138KV CKT 1	98	242.841	G16-063-TAP 345.00 - SUNNYSIDE 345KV CKT 1
ENOWILT - LONE OAK 138KV CKT 1	98	238.2054	G16-063-TAP 345.00 - SUNNYSIDE 345KV CKT 1
ENOWILT - SARDIS 138KV CKT 1	98	239.0218	G16-063-TAP 345.00 - SUNNYSIDE 345KV CKT 1
	Mitigation		2015 ITP10 Upgrade(s)

At this time, GEN-2016-019 ERIS analysis observed constraints on Hugo – GEN-2016-063 Tap – Sunnyside 345kV transmission circuit. Replacing terminal equipment to achieve at least 1290MVA (2160 amps) emergency rating will be required to alleviate the constraints on Hugo – GEN-2016-063 Tap – Sunnyside 345kV transmission circuit. Constraints on the Clayton – Sardis – Enogex Wilburton 138kV transmission circuit found during the analysis for the GEN-2016-018 NRIS can be mitigated with approved upgrades from the 2015 ITP 10 Study Brown – Tupelo 138kV will require terminal equipment upgrades for mitigation of overload.

Table 6: Group 14 Power Flow Analysis (GEN-2016-019)

ERIS Constraints

MONITORED ELEMENT	RATE (MVA)	TC% LOADING (%)	CONTINGENCY
G16-063-TAP 345.00 - HUGO 345KV CKT 1	1194.9	107.7275	G16-063-TAP 345.00 - SUNNYSIDE 345KV CKT 1
G16-063-TAP 345.00 - SUNNYSIDE 345KV CKT 1	1193.6	107.8448	G16-063-TAP 345.00 - HUGO 345KV CKT 1
	Mitigation		Replace terminal equipment on Hugo – Sunnyside 345kV

NRIS Constraints			
MONITORED ELEMENT	RATE (MVA)	TC% LOADING (%)	CONTINGENCY
CLAYTON - SARDIS 138KV CKT 1	98	230.7751	G16-063-TAP 345.00 - SUNNYSIDE 345KV CKT 1
ENOWILT - LONE OAK 138KV CKT 1	98	226.1519	G16-063-TAP 345.00 - SUNNYSIDE 345KV CKT 1
ENOWILT - SARDIS 138KV CKT 1	98	226.9682	G16-063-TAP 345.00 - SUNNYSIDE 345KV CKT 1
	Mitigation		2015 ITP10 Upgrade(s)
BROWN - TUPELO 138KV CKT 1	95.9	120.7094	G16-063-TAP 345.00 - HUGO 345KV CKT 1
	Mitigation		Replace terminal equipment on Brown – Tupelo 138kV

8.13 Cluster Group 15 (Eastern South Dakota)

In addition to approximately 2,326.4 MW of previously queued generation in the area, 44.6 MW of new interconnection service was studied. No new additional constraints were found in this area for the addition of GEN-2016-036.

Table 7: Group 15 Power Flow Analysis

ERIS Constraints			
MONITORED ELEMENT	RATE (MVA)	TC% LOADING (%)	CONTINGENCY
Currently, no additional constraints			
	Mitigation		

8.14 Cluster Group 16 (Western North Dakota)

In addition to approximately 4,527.41 MW of previously queued generation in the area, 264.5 MW of new interconnection service was studied.

The following facilities are not yet approved, but are currently identified as being assignable to DISIS-2016-002 Interconnection Requests. FCS-2016-002 Interconnection Requests have been identified as impacting these facilities but have not been identified as being required for additional reinforcement beyond what is needed from DISIS-2016-001 Interconnection Requests. These facilities upgrades were considered to be placed in service and accounted for in the models for the FCS-2016-002 study. This list may not be all inclusive. The FCS-2016-002 Interconnection Customers at this time do not have responsibility for these facilities but may later be assigned the cost of these facilities if higher queued customers terminate their GIA or withdraw from the interconnection queue. The FCS-2016-002 Interconnection Customer Generation Facilities in-service dates may need to be delayed until the completion of the following upgrade(s).

- Bison - Hetinger 230kV circuit #1

GEN-2016-035 ERS analysis observed constraints along the Bismark – GEN-2016-035 Tap – Mound City (Hawdon) – Glenham – Whitlok – Sully Butte – Oahe 230kV transmission circuits during contingencies. For mitigation, a new 230kV line from the proposed GEN-2016-035 POI Substation to a new 345/230kV substation (Morton County) tapping and looping in the Leland Olds – Fort Thompson 345kV transmission circuit is required. At the Morton Substation, a new 345/230/13kV transformer will also be required to alleviate the Bismark to Oahe 230kV overloads. Other constraints observed are listed below that are subject to higher queue assignment. If upgrades within the Western Area Power Administration footprint are required, an environmental review could be required for the corresponding facilities.

Table 8: Group 16 Power Flow Analysis

ERIS Constraints			
MONITORED ELEMENT	RATE (MVA)	TC% LOADING (%)	CONTINGENCY
BISMARK - G16-035-TAP 230.00 230KV CKT 1	263.3	115.2028	GLENHAM - L3 HAWDON 230KV CKT 1
G16-035-TAP 230.00 - L3 HAWDON 230KV CKT 1	262.6	113.7183	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
GLENHAM - L3 HAWDON 230KV CKT 1	263.6	119.7361	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
GLENHAM - WHITLOK 230KV CKT 1	258.5	106.8593	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
OAHE - SULLEY BUTTE 230KV CKT 1	254	103.3588	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
SULLEY BUTTE - SULLYBT-LNX3230.00 230KV CKT Z	258.5	104.6929	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
SULLYBT-LNX3230.00 - WHITLOK 230KV CKT 1	262.5	103.0976	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
	Mitigation		Build new 345/230 substation along Leland Olds – Fort Thompson 345kV, Build 20 miles of new 230kV from new substation to GEN-2016-035 POI substation.
G09_001IST 345.00 - WATERTOWN 345KV CKT 1	706.4	101.3412	System intact
WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	715.9	109.0171	System intact
SPLIT ROCK - WHITE 345KV CKT 1	713.7	101.5107	System intact
WATERTN-LNX3345.00 - WHITE 345KV CKT 1	708.9	110.0936	System intact
	Mitigation		Potential DISIS-2015-002-1 Network Upgrade(s)

Group 16 current study requests did not request to be studied as NRIS, therefore no additional NRIS analysis was conducted for Group 16 current study requests.

8.15 Cluster Group 17 (Western and South Central South Dakota)

In addition to approximately 693.9 MW of previously queued generation in the area, 140.0 MW of new interconnection service was studied. No new ERS additional constraints were found in this area for GEN-2016-006. New NRIS constraints were observed for Grand Island – Grand Island LNX 345kV, Valentine – Harmony – St Francis – Mission – Witten 115kV transmission circuit, and Scotts Bluff – Victory Hill 115kV. NRIS mitigation would include advancing the NPPD Gentleman Generation Station – Thedford – Holt 345kV Project (R-Plan), building a second Mission – Witten 115kV circuit, and rebuilding or re-conductor Scotts Bluff – Victory Hill 115kV. If upgrades within the Western Area Power Administration footprint are required, an environmental review could be required for the corresponding facilities.

Table 9: Group 17 Power Flow Analysis

ERIS Constraints			
MONITORED ELEMENT	RATE (MVA)	TC% LOADING (%)	CONTINGENCY

Currently, no additional constraints		
	Mitigation	

NRIS Constraints			
MONITORED ELEMENT	RATE (MVA)	TC% LOADING (%)	CONTINGENCY
GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	685.7	101.1274	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT
	Mitigation		Advance R-Plan
HARMONY - ST FRANCIS 115KV CKT 1	74.4	164.8293	MISSION - WITTEN 115KV CKT 1
HARMONY - VALENTINE 115KV CKT 1	73.4	157.2657	MISSION - WITTEN 115KV CKT 1
MISSION - ST FRANCIS 115KV CKT 1	80	172.6663	MISSION - WITTEN 115KV CKT 1
MISSION - WITTEN 115KV CKT 1	119.8	105.0726	MISSION - ST FRANCIS 115KV CKT 1
	Mitigation		Build second Mission – Witten 115kV circuit #2
SCOTTSBLUFF - VICTORY HILL 115KV CKT 1	119.3	106.8959	STEGALL - STEGALL TRANSFORMER 230KV CKT

8.16 Cluster Group 18 (Eastern North Dakota)

In addition to approximately 261.5 MW of previously queued generation in the area, 0.0 MW of new interconnection service was studied. No new constraints were found in this area.

8.17 Curtailment and System Reliability

In no way does this study guarantee operation for all periods of time. It should be noted that although this study analyzed many of the most probable contingencies, it is not an all-inclusive list and cannot account for every operational situation. Because of this, it is likely that the Customer(s) may be required to reduce their generation output to 0 MW, also known as curtailment, under certain system conditions to allow system operators to maintain the reliability of the transmission network.

9 Conclusion

The minimum cost of interconnecting 2,888.4 MW of new interconnection requests included in this Feasibility Cluster Study are listed in Appendices E and F, which include the Allocated Network Upgrades and Transmission Owner Interconnection Facilities.

Within the study scope of the Feasibility Cluster Studies, two (2) mutually exclusive Point of Interconnections (primary or secondary POI) assumption analyses were conducted for GEN-2016-010 and GEN-2016-026. In addition, GEN-2016-018 and GEN-2016-019 Interconnection Service requests were evaluated mutually exclusive for transmission impacts per the request of the Interconnection Customer(s). The constraints identified for each of these configurations can be found in Appendix G and H. Affected System constraints can be found in Appendix H-AS.

If the Interconnection Customers proceed into the Preliminary Interconnection System Impact Study (PISIS) or Definitive Interconnection System Impact Study (DISIS), the Interconnection Customer can propose only one Point of Interconnection (POI). The total estimated minimum cost for interconnecting the FCS-2016-002 Interconnection Customers is estimated at \$218,811,083 as show in Appendix E and F. This total cost estimate is contingent upon higher queued customers paying for certain required network upgrades. Additionally, the total cost estimates are contingent on potential DISIS-2016-001 identified upgrades.

The one-line diagrams in Appendix D should be consulted for details of the alternate POIs. These costs do not include the Interconnection Customer Interconnection Facilities as defined by the SPP Open Access Transmission Tariff (OATT). This cost does not include the possible need for reactive compensation or additional interconnection facilities or network upgrades that may be identified through additional analyses performed in the PISIS and DISIS.

The powerflow results listed in this report were obtained by analyzing the 2,888.4 MW of the FCS-2016-002 Feasibility Study Interconnection Requests in addition to prior queued Interconnection Requests up to and including DISIS-2016-001. The DISIS-2016-001 study is not yet complete and full AC contingency analysis has not been performed for DISIS-2016-001. The full AC contingency and stability analysis for DISIS-2016-001 may result in additional upgrades and/or constraints that are assigned to the FCS-2016-002 Customers in this study. However, if any Interconnection Requests withdraw from the higher queued studies including DISIS-2016-001, then potential upgrades tentatively assigned to those Interconnection Requests may be assigned to the Interconnection Requests in this FCS-2016-002 study once FCS-2016-002 Interconnection Requests move forward into the next study phase.

These interconnection costs do not include any cost of Network Upgrades determined to be required by AC power flow analysis, short circuit or transient stability analysis. These studies will be performed if the Interconnection Customer executes the appropriate Interconnection System Impact Study Agreement and provides the required data along with demonstration of Site Control and the appropriate deposit. At the time of the System Impact Cluster Study, a better determination of the interconnection facilities may be available.

The required interconnection costs listed in Appendices E and F, and other upgrades associated with Network Constraints do not include all costs associated with the deliverability of the energy to final customers. These costs are determined by separate studies if the Customer submits a Transmission Service Request (TSR) through SPP's Open Access Same Time Information System (OASIS) as required by Attachment Z1 of the SPP Open Access Transmission Tariff (OATT).

10 Appendix

10.1 A: Generator Interconnection Requests Considered for Study

See next page.

A: Generation Interconnection Requests Considered for Study

Request	Amount	Service	Area	Requested Point of Interconnection	Proposed Point of Interconnection	Requested In-Service Date	In Service Date Delayed Until no earlier than*
GEN-2016-006	140.00	ER/NR	WAPA	Phillip Tap 230kV	Phillip Tap 230kV	12/31/2018	TBD
GEN-2016-010	134.00	ER	WERE/SUN CMKEC	Viola 345kV/Harper 138kV	Viola 345kV/Harper 138kV	12/31/2018	TBD
GEN-2016-018	884.00	ER/NR	OKGE	Tap Hugo - Sunnyside 345kV	Tap Hugo - Sunnyside 345kV	6/1/2021	TBD
GEN-2016-019	1,219.00	ER/NR	OKGE	Tap Hugo - Sunnyside 345kV	Tap Hugo - Sunnyside 345kV	6/1/2021	TBD
GEN-2016-026	120.00	ER	NPPD	Callaway 115kV/ Broken Bow 115kV	Callaway 115kV/ Broken Bow 115kV	12/31/2018	TBD
GEN-2016-033	74.00	ER/NR	OKGE	Imo 138kV	Imo 138kV	12/31/2018	TBD
GEN-2016-035	264.50	ER	WAPA	Bismark - Mound City 230kV	Bismark - Mound City 230kV	6/1/2018	TBD
GEN-2016-036	44.60	ER	WAPA	Granite Falls 115kV	Granite Falls 115kV	12/31/2018	TBD
Total:						2,880.10	

*In-Service Date for each request is to be determined after the Interconnection Facility Study is completed.

10.2 B: Prior Queued Interconnection Requests

See next page.

B: Prior Queued Interconnection Requests

Request	Amount	Area	Requested/Proposed Point of Interconnection	Status or In-Service Date
ASGI-2010-006	150.00	AECI	Remington 138kV	AECI queue Affected Study
ASGI-2010-010	42.20	SPS	Lovington 115kV	Lea County Affected Study
ASGI-2010-020	30.00	SPS	Tap LE-Tatum - LE-Crossroads 69kV	Lea County Affected Study
ASGI-2010-021	15.00	SPS	Tap LE-Saunders Tap - LE-Anderson 69kV	Lea County Affected Study
ASGI-2011-001	27.30	SPS	Lovington 115kV	On-Line
ASGI-2011-002	20.00	SPS	Herring 115kV	On-Line
ASGI-2011-003	10.00	SPS	Hendricks 69kV	On-Line
ASGI-2011-004	20.00	SPS	Pleasant Hill 69kV	Under Study (DISIS-2011-002)
ASGI-2012-002	18.15	SPS	FE-Clovis Interchange 115kV	Under Study (DISIS-2012-002)
ASGI-2012-006	22.50	SUNCMKEC	Tap Hugoton - Rolla 69kV	Under Study (DISIS-2012-001)
ASGI-2013-001	11.50	SPS	PanTex South 115kV	Under Study (DISIS-2013-001)
ASGI-2013-002	18.40	SPS	FE Tucumcari 115kV	Under Study (DISIS-2013-001)
ASGI-2013-003	18.40	SPS	FE Clovis 115kV	Under Study (DISIS-2013-001)
ASGI-2013-004	36.60	SUNCMKEC	Morris 115kV	Under Study (DISIS-2013-002)
ASGI-2013-005	1.65	SPS	FE Clovis 115kV	Under Study (DISIS-2013-002)
ASGI-2013-006	2.00	SPS	SP-Erskine 115kV	
ASGI-2014-001	2.50	SPS	SP-Erskine 115kV	Under Study (DISIS-2014-001)
ASGI-2014-014	56.40	GRDA	Ferguson 69kV	Under Study (DISIS-2014-002)
ASGI-2015-001	6.13	SUNCMKEC	Ninnescah 115kV	Under Study (DISIS-2015-001)
ASGI-2015-002	2.00	SPS	SP-Yuma 69kV	Under Study (DISIS-2015-001)
ASGI-2015-004	56.36	GRDA	Coffeyville City 69kV	Under Study (DISIS-2015-001)
ASGI-2015-006	9.00	SWPA	Tupelo 138kV	Under Study (DISIS-2015-002)
ASGI-2016-001	2.50	SPS	Wolfforth 115kV	DISIS STAGE
ASGI-2016-002	0.35	SPS	Hurlwood 115kV	DISIS STAGE
ASGI-2016-003	6.00	KCPL		DISIS STAGE
ASGI-2016-004	9.60	SPS		DISIS STAGE
ASGI-2016-005	20.00	WAPA	Tap White Lake - Stickeny 69kV	DISIS STAGE
ASGI-2016-006	20.00	WAPA	Mitchall	DISIS STAGE
ASGI-2016-007	20.00	WAPA	Kimball 69kV	DISIS STAGE
G176	100.00	XEL	Yankee 115kV	MISO Queued Request
G255	100.00	XEL	Yankee 115kV	MISO Queued Request
G359	150.00	MDU	MDU 230 kV system near Ellendale	MISO Queued Request
G380	150.00	OTP	Rugby 115kV	MISO Queued Request
G408	12.00	XEL	Tap McHenry - Souris 115kV	MISO Queued Request
G502	50.60	MP	Milton Young 230kV	MISO Queued Request
G586	30.00	XEL	Yankee 115kV	MISO Queued Request
G645	50.00	GRE	Ladish 115kV	MISO Queued Request
G723	10.00	MDU	Haskett 115kV	MISO Queued Request
G736	200.00	OTP	Big Stone South 230kV	MISO Queued Request
G752	150.00	MDU	Tap Bison - Hettinger 230kV	MISO Queued Request
G788	49.00	GRE	Ladish 115kV	MISO Queued Request
G830	99.00	GRE	GRE McHenry 115kV	MISO Queued Request
GEN-2001-014	96.00	WFEC	Ft Supply 138kV	On-Line
GEN-2001-026	74.30	WFEC	Washita 138kV	On-Line
GEN-2001-033	180.00	SPS	San Juan Tap 230kV	On-Line at 120MW
GEN-2001-036	80.00	SPS	Norton 115kV	On-Line

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GEN-2001-037	100.00	OKGE	FPL Moreland Tap 138kV	On-Line
GEN-2001-039A	105.00	SUNCMKEC	Shooting Star Tap 115kV	On-Line
GEN-2001-039M	100.00	SUNCMKEC	Central Plains Tap 115kV	On-Line
GEN-2002-004	200.00	WERE	Latham 345kV	On-Line at 150MW
GEN-2002-005	120.00	WFEC	Red Hills Tap 138kV	On-Line
GEN-2002-008	240.00	SPS	Hitchland 345kV	On-Line at 120MW
GEN-2002-008IS	40.50	WAPA	Edgeley 115kV [Pomona 115kV]	Commercial Operation
GEN-2002-009	80.00	SPS	Hansford 115kV	On-Line
GEN-2002-009IS	40.00	WAPA	Ft Thompson 69kV [Hyde 69kV]	Commercial Operation
GEN-2002-022	240.00	SPS	Bushland 230kV	On-Line
GEN-2002-023N	0.80	NPPD	Harmony 115kV	On-Line
GEN-2002-025A	150.00	SUNCMKEC	Spearville 230kV	On-Line
GEN-2003-004	100.00	WFEC	Washita 138kV	On-Line
GEN-2003-005	100.00	WFEC	Anadarko - Paradise (Blue Canyon) 138kV	On-Line
GEN-2003-006A	200.00	SUNCMKEC	Elm Creek 230kV	On-Line
GEN-2003-019	250.00	MIDW	Smoky Hills Tap 230kV	On-Line
GEN-2003-020	160.00	SPS	Martin 115kV	On-Line
GEN-2003-021N	75.00	NPPD	Ainsworth Wind Tap 115kV	On-Line
GEN-2003-022	120.00	AEPW	Weatherford 138kV	On-Line
GEN-2004-014	154.50	SUNCMKEC	Spearville 230kV	On-Line at 100MW
GEN-2004-020	27.00	AEPW	Weatherford 138kV	On-Line
GEN-2004-023	20.60	WFEC	Washita 138kV	On-Line
GEN-2004-023N	75.00	NPPD	Columbus Co 115kV	On-Line
GEN-2005-003	30.60	WFEC	Washita 138kV	On-Line
GEN-2005-003IS	100.00	WAPA	Nelson 115kV	Commercial Operation
GEN-2005-008	120.00	OKGE	Woodward 138kV	On-Line
GEN-2005-008IS	50.00	WAPA	Hilken 230kV [Ecklund 230kV]	Commercial Operation
GEN-2005-012	250.00	SUNCMKEC	Ironwood 345kV	On-Line at 160MW
GEN-2005-013	201.00	WERE	Caney River 345kV	On-Line
GEN-2006-001IS	10.00	XEL	Marshall 115kV	Commercial Operation
GEN-2006-002	101.00	AEPW	Sweetwater 230kV	On-Line
GEN-2006-002IS	51.00	WAPA	Wessington Springs 230kV	Commercial Operation
GEN-2006-006IS	10.00	XEL	Marshall 115kV	Commercial Operation
GEN-2006-015IS	50.00	WAPA	Hilken 230kV [Ecklund 230kV]	Commercial Operation
GEN-2006-018	170.00	SPS	TUCO Interchange 230kV	On-Line
GEN-2006-020N	42.00	NPPD	Bloomfield 115kV	On-Line
GEN-2006-020S	18.90	SPS	DWS Frisco 115kV	On-Line
GEN-2006-021	101.00	SUNCMKEC	Flat Ridge Tap 138kV	On-Line
GEN-2006-024S	19.80	WFEC	Buffalo Bear Tap 69kV	On-Line
GEN-2006-026	502.00	SPS	Hobbs 230kV & Hobbs 115kV	On-Line
GEN-2006-031	75.00	MIDW	Knoll 115kV	On-Line
GEN-2006-035	225.00	AEPW	Sweetwater 230kV	On-Line at 132MW
GEN-2006-037N1	75.00	NPPD	Broken Bow 115kV	On-Line
GEN-2006-038N005	80.00	NPPD	Broken Bow 115kV	On-Line
GEN-2006-038N019	80.00	NPPD	Petersburg North 115kV	On-Line
GEN-2006-043	99.00	AEPW	Sweetwater 230kV	On-Line
GEN-2006-044	370.00	SPS	Hitchland 345kV	On-Line at 120MW
GEN-2006-044N	40.50	NPPD	North Petersburg 115kV	On-Line
GEN-2006-046	131.00	OKGE	Dewey 138kV	On-Line
GEN-2007-011N08	81.00	NPPD	Bloomfield 115kV	On-Line

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GEN-2007-013IS	50.00	WAPA	Wessington Springs 230kV	Commercial Operation
GEN-2007-014IS	100.00	WAPA	Wessington Springs 230kV	Commercial Operation
GEN-2007-015IS	100.00	WAPA	Hilken 230kV [Ecklund 230kV]	Commercial Operation
GEN-2007-017IS	166.00	WAPA	Ft Thompson-Grand Island 345kV	On Schedule
GEN-2007-018IS	234.00	WAPA	Ft Thompson-Grand Island 345kV	On Schedule
GEN-2007-020IS	16.00	WAPA	Nelson 115kV	Commercial Operation
GEN-2007-021	201.00	OKGE	Tatonga 345kV	On-Line
GEN-2007-023IS	50.00	WAPA	Formit-Summit 115kV	On Suspension
GEN-2007-025	300.00	WERE	Viola 345kV	On-Line
GEN-2007-027IS	99.00	WAPA	Bismarck-Garrison 230kV #1	On Suspension
GEN-2007-040	200.00	SUNCMKEC	Buckner 345kV	On-Line at 132MW
GEN-2007-043	200.00	OKGE	Minco 345kV	On-Line
GEN-2007-044	300.00	OKGE	Tatonga 345kV	On-Line at 199MW
GEN-2007-046	200.00	SPS	Hitchland 115kV	On-Line
GEN-2007-050	170.00	OKGE	Woodward EHV 138kV	On-Line at 150MW
GEN-2007-052	150.00	WFEC	Anadarko 138kV	On-Line
GEN-2007-062	765.00	OKGE	Woodward EHV 345kV	On Schedule for 2016 and 2017
GEN-2008-003	101.00	OKGE	Woodward EHV 138kV	On-Line
GEN-2008-008IS	5.00	WAPA	Nelson 115kV	Commercial Operation
GEN-2008-013	300.00	OKGE	Hunter 345kV	On-Line at 235MW
GEN-2008-018	250.00	SPS	Finney 345kV	On-Line
GEN-2008-021	42.00	WERE	Wolf Creek 345kV	On-Line
GEN-2008-022	300.00	SPS	Crossroads 345kV	On-Line
GEN-2008-023	150.00	AEPW	Hobart Junction 138kV	On-Line
GEN-2008-037	101.00	WFEC	Slick Hills 138kV	On-Line
GEN-2008-044	197.80	OKGE	Tatonga 345kV	On-Line
GEN-2008-047	300.00	OKGE	Beaver County 345kV	On-Line
GEN-2008-051	322.00	SPS	Potter County 345kV	On-Line at 161MW
GEN-2008-079	99.20	SUNCMKEC	Crooked Creek 115kV	On-Line
GEN-2008-086N02	201.00	NPPD	Meadow Grove 230kV	On-Line
GEN-2008-092	200.60	MIDW	Post Rock 230kV	On-Line
GEN-2008-098	100.80	WERE	Waverly 345kV	On-Line
GEN-2008-119O	60.00	OPPD	S1399 161kV	On-Line
GEN-2008-123N	89.70	NPPD	Tap Pauline - Hildreth (Rosemont) 115kV	On Schedule for 2016
GEN-2008-124	200.10	SUNCMKEC	Ironwood 345kV	On Schedule for 2016
GEN-2008-129	80.00	KCPL	Pleasant Hill 161kV	On-Line
GEN-2009-001IS	200.00	WAPA	Groton-Watertown 345kV	On Schedule
GEN-2009-006IS	90.00	WAPA	Mission 115kV	On Suspension
GEN-2009-007IS	100.00	WAPA	Mission 115kV	On Suspension
GEN-2009-008	199.50	MIDW	South Hays 230kV	On-Line
GEN-2009-018IS	100.00	WAPA	Groton 115kV	Commercial Operation
GEN-2009-020	48.30	MIDW	Walnut Creek 69kV	On-Line
GEN-2009-020AIS	130.50	WAPA	Tripp Junction 115kV	Commercial Operation
GEN-2009-025	59.80	OKGE	Nardins 69kV	On-Line
GEN-2009-026IS	110.00	WAPA	Dickenson-Heskett 230kV	On Schedule
GEN-2009-040	73.80	WERE	Marshall 115kV	On Schedule for 2016
GEN-2010-001	300.00	OKGE	Beaver County 345kV	On-Line
GEN-2010-001IS	99.00	WAPA	Bismarck-Glenham 230kV	On Schedule
GEN-2010-003	100.80	WERE	Waverly 345kV	On-Line
GEN-2010-003IS	34.00	WAPA	Wessington Springs 230kV	Commercial Operation

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GEN-2010-005	299.20	WERE	Viola 345kV	On-Line at 170MW
GEN-2010-006	205.00	SPS	Jones 230kV	On-Line
GEN-2010-007IS	172.50	WAPA	Antelope Valley 345kV	On Suspension
GEN-2010-009	165.60	SUNCMKEC	Buckner 345kV	On-Line
GEN-2010-011	29.70	OKGE	Tatonga 345kV	On-Line
GEN-2010-014	358.80	SPS	Hitchland 345kV	On Schedule for 2018
GEN-2010-036	4.60	WERE	6th Street 115kV	On-Line
GEN-2010-040	300.00	OKGE	Cimarron 345kV	On-Line
GEN-2010-041	10.50	OPPD	S1399 161kV	On Schedule for 2015
GEN-2010-045	197.80	SUNCMKEC	Buckner 345kV	On Schedule for 2017
GEN-2010-046	56.00	SPS	TUCO Interchange 230kV	On Schedule for 2016
GEN-2010-048	70.00	MIDW	Tap Beach Station - Redline 115kV	FACILITY STUDY STAGE
GEN-2010-051	200.00	NPPD	Tap Hoskins - Twin Church (Dixon County) 230kV	On Schedule for 2018
GEN-2010-055	4.50	AEPW	Wekiwa 138kV	On-Line
GEN-2010-057	201.00	MIDW	Rice County 230kV	On-Line
GEN-2011-008	600.00	SUNCMKEC	Clark County 345kV	On Schedule for 2016
GEN-2011-010	100.80	OKGE	Minco 345kV	On-Line
GEN-2011-011	50.00	KCPL	Iatan 345kV	On-Line
GEN-2011-014	201.00	OKGE	Tap Hitchland - Woodward Dbl Ckt (GEN-2011-014 Tap) 345kV	On Schedule for 2016
GEN-2011-016	200.10	SUNCMKEC	Ironwood 345kV	On Suspension
GEN-2011-018	73.60	NPPD	Steele City 115kV	On-Line
GEN-2011-019	299.00	OKGE	Woodward 345kV	On Schedule for 2017
GEN-2011-020	299.00	OKGE	Woodward 345kV	On Schedule for 2017
GEN-2011-022	299.00	SPS	Hitchland 345kV	On Schedule for 2016 (150MW) and 2017 (149MW)
GEN-2011-025	80.00	SPS	Tap Floyd County - Crosby County 115kV	On Schedule for 2016
GEN-2011-027	120.00	NPPD	Tap Hoskins - Twin Church (Dixon County) 230kV	On Schedule for 2018
GEN-2011-037	7.00	WFEC	Blue Canyon 5 138kV	On-Line
GEN-2011-040	111.00	OKGE	Carter County 138kV	On-Line
GEN-2011-045	205.00	SPS	Jones 230kV	On-Line
GEN-2011-046	27.00	SPS	Lopez 115kV	On-Line
GEN-2011-048	175.00	SPS	Mustang 230kV	On-Line
GEN-2011-049	250.70	OKGE	Border 345kV	On Schedule for 2016
GEN-2011-050	109.80	AEPW	Santa Fe Tap 138kV	On Schedule for 2016
GEN-2011-051	104.40	OKGE	Tap Woodward - Tatonga 345kV (GEN-2011-051 Tap)	On Schedule for 2017
GEN-2011-054	300.00	OKGE	Cimarron 345kV	On-Line
GEN-2011-056	3.60	NPPD	Jeffrey 115kV	On-Line
GEN-2011-056A	3.60	NPPD	John 1 115kV	On-Line
GEN-2011-056B	4.50	NPPD	John 2 115kV	On-Line
GEN-2011-057	150.40	WERE	Creswell 138kV	On-Line
GEN-2012-001	61.20	SPS	Cirrus Tap 230kV	On-Line
GEN-2012-004	41.40	OKGE	Carter County 138kV	On-Line
GEN-2012-006IS	125.01	WAPA	Williston-Ch. Creek 230kV	On Schedule
GEN-2012-007	120.00	SUNCMKEC	Rubart 115kV	On-Line
GEN-2012-009IS	99.00	WAPA	Fort Randall 115kV	On Suspension
GEN-2012-012IS	75.00	WAPA	Wolf Point-Circle 115kV	On Suspension
GEN-2012-014IS	99.50	WAPA	Groton 115kV	On Schedule
GEN-2012-020	478.00	SPS	TUCO 230kV	On Schedule for 2016
GEN-2012-021	4.80	LES	Terry Bundy Generating Station 115kV	On-Line

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GEN-2012-024	180.00	SUNCMKEC	Clark County 345kV	On Schedule for 2016
GEN-2012-028	74.80	WFEC	Gotebo 69kV	On-Line
GEN-2012-032	300.00	OKGE	Open Sky 345kV	On-Line
GEN-2012-033	98.10	OKGE	Tap and Tie South 4th - Bunch Creek & Enid Tap - Fairmont (GEN-2012-033T) 138kV	On-Line
GEN-2012-034	7.00	SPS	Mustang 230kV	On-Line
GEN-2012-035	7.00	SPS	Mustang 230kV	On-Line
GEN-2012-036	7.00	SPS	Mustang 230kV	On-Line
GEN-2012-037	203.00	SPS	TUCO 345kV	On-Line
GEN-2012-041	121.50	OKGE	Ranch Road 345kV	On-Line
GEN-2013-001IS	90.00	WAPA	Summit-Watertown 115kV	On Suspension
GEN-2013-002	50.60	LES	Tap Sheldon - Folsom & Pleasant Hill (GEN-2013-002 Tap) 115kV CKT 2	On Schedule for 2016
GEN-2013-007	100.30	OKGE	Tap Prices Falls - Carter 138kV	On-Line
GEN-2013-008	1.20	NPPD	Steele City 115kV	On-Line
GEN-2013-009IS	19.50	WAPA	Redfield NW 115kV	Commercial Operation
GEN-2013-010	99.00	SUNCMKEC	Tap Spearville - Post Rock (North of GEN-2011-017 Tap) 345kV	On Schedule for 2018
GEN-2013-011	30.00	AEPW	Turk 138kV	On-Line
GEN-2013-012	147.00	OKGE	Redbud 345kV	On-Line
GEN-2013-016	203.00	SPS	TUCO 345kV	On Schedule for 2017
GEN-2013-019	73.60	LES	Tap Sheldon - Folsom & Pleasant Hill (GEN-2013-002 Tap) 115kV CKT 2	On Schedule for 2016
GEN-2013-022	25.00	SPS	Norton 115kV	On Schedule for 2016
GEN-2013-027	150.00	SPS	Tap Tolk - Yoakum 230kV	IA Pending
GEN-2013-028	559.50	GRDA	Tap N Tulsa - GRDA 1 345kV	On Schedule for 2017
GEN-2013-029	300.00	OKGE	Renfrow 345kV	On-Line for 151.6MW
GEN-2013-030	300.00	OKGE	Beaver County 345kV	On Suspension
GEN-2013-032	204.00	NPPD	Antelope 115kV	On Schedule for 2017
GEN-2013-033	28.00	MIDW	Knoll 115kV	On Schedule for 2016
GEN-2014-001	200.60	WERE	Tap Wichita - Emporia Energy Center (GEN-2014-001 Tap) 345kV	On Suspension
GEN-2014-001IS	103.70	WAPA	Newell-Maurine 115kV	FACILITY STUDY STAGE
GEN-2014-002	10.50	OKGE	Tatonga 345kV (GEN-2007-021 POI)	On Schedule for 2015
GEN-2014-003	15.80	OKGE	Tatonga 345kV (GEN-2007-044 POI)	On Schedule for 2015
GEN-2014-003IS	91.00	WAPA	Culbertson 115kV	On Schedule
GEN-2014-004	4.00	NPPD	Steele City 115kV (GEN-2011-018 POI)	On-Line
GEN-2014-004IS	384.20	WAPA	Charlie Creek 345kV	FACILITY STUDY STAGE
GEN-2014-005	5.70	OKGE	Minco 345kV (GEN-2011-010 POI)	On-Line
GEN-2014-006IS	125.00	WAPA	Williston 115kV	On Schedule
GEN-2014-010IS	150.00	WAPA	Neset 115kV	On Schedule
GEN-2014-012	225.00	SPS	Tap Hobbs Interchange - Andrews 230kV	On Suspension
GEN-2014-013	73.50	NPPD	Meadow Grove (GEN-2008-086N2 Sub) 230kV	On-Line
GEN-2014-014IS	151.50	WAPA	Belfield-Rhame 230kV	On Schedule
GEN-2014-020	100.00	AEPW	Tuttle 138kV	On Schedule for 2017
GEN-2014-021	300.00	KCPL	Tap Nebraska City - Mullin Creek 345kV	On Schedule for 2016
GEN-2014-025	2.40	MIDW	Walnut Creek 69kV	On-Line
GEN-2014-028	35.00	EMDE	Riverton 161kV	On Schedule for 2016
GEN-2014-031	35.80	NPPD	Meadow Grove 230kV	On-Line
GEN-2014-032	10.20	NPPD	Meadow Grove 230kV	On Schedule for 2016
GEN-2014-033	70.00	SPS	Chaves County 115kV	On Schedule for 2016

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GEN-2014-034	70.00	SPS	Chaves County 115kV	On Schedule for 2016
GEN-2014-035	30.00	SPS	Chaves County 115kV	On Schedule for 2018
GEN-2014-037	200.00	SPS	Tap Hitchland - Beaver County Dbl Ckt (Optima) 345kV	FACILITY STUDY STAGE
GEN-2014-039	73.40	NPPD	Friend 115kV	On Schedule for 2017
GEN-2014-040	320.40	SPS	Castro 115kV	On Schedule for 2016
GEN-2014-041	120.80	SUNCMKEC	Arnold 115kV	On Suspension
GEN-2014-047	40.00	SPS	Crossroads 345kV	On Schedule for 2017
GEN-2014-056	250.00	OKGE	Minco 345kV	On Schedule for 2016
GEN-2014-057	250.00	AEPW	Tap Lawton - Sunnyside (Terry Road) 345kV	On Schedule for 2016
GEN-2014-064	248.40	OKGE	Otter 138kV	On Suspension
GEN-2014-074	152.00	SPS	Tap TUCO Interchange - Oklaunion (GEN-2014-074 Tap) 345kV	FACILITY STUDY STAGE
GEN-2015-001	200.00	OKGE	Ranch Road 345kV	On Schedule for 2016
GEN-2015-004	52.90	OKGE	Border 345kV	IA Pending
GEN-2015-005	200.10	KCPL	Tap Nebraska City - Sibley 345kV	FACILITY STUDY STAGE
GEN-2015-007	160.00	NPPD	Hoskins 345kV	FACILITY STUDY STAGE
GEN-2015-013	120.00	WFEC	Synder 138kV	FACILITY STUDY STAGE
GEN-2015-014	150.00	SPS	Tap Cochran - Lehman 115kV	FACILITY STUDY STAGE
GEN-2015-015	154.60	OKGE	Tap Medford Tap - Coyote 138kV	FACILITY STUDY STAGE
GEN-2015-016	200.00	KCPL	Tap Marmaton - Centerville 161kV	On Schedule for 2018
GEN-2015-018	80.00	SPS	Tap Curry County - Bailey 115kV	DISIS STAGE
GEN-2015-020	100.00	SPS	Oasis 115kV	FACILITY STUDY STAGE
GEN-2015-021	20.00	SUNCMKEC	Johnson Corner 115kV	FACILITY STUDY STAGE
GEN-2015-022	112.00	SPS	Swisher 115kV	FACILITY STUDY STAGE
GEN-2015-023	300.70	NPPD	Holt County 345kV	FACILITY STUDY STAGE
GEN-2015-024	220.00	WERE	Tap Thistle - Wichita 345kV Dbl CKT	On Schedule for 2016
GEN-2015-025	220.00	WERE	Tap Thistle - Wichita 345kV Dbl CKT	FACILITY STUDY STAGE
GEN-2015-027	4.90	SUNCMKEC	Crooked Creek 115kV	IA Pending
GEN-2015-029	161.00	OKGE	Tatonga 345kV	IA Pending
GEN-2015-030	200.10	OKGE	Sooner 345kV	IA Pending
GEN-2015-031	150.50	SPS	Tap Amarillo South - Swisher 230kV	FACILITY STUDY STAGE
GEN-2015-033	152.00	SPS	Tap TUCO Interchange - Oklaunion (GEN-2014-074 Tap) 345kV	DISIS STAGE
GEN-2015-034	200.00	OKGE	Ranch Road 345kV	FACILITY STUDY STAGE
GEN-2015-036	303.60	OKGE	Johnston County 345kV	DISIS STAGE
GEN-2015-038	303.60	OKGE	Cimarron 345kV	DISIS STAGE
GEN-2015-039	50.00	SPS	Tap Deaf Smith - Plant X 230kV	DISIS STAGE
GEN-2015-040	50.10	SPS	Mustang 230kV	DISIS STAGE
GEN-2015-041	5.00	SPS	TUCO Interchange 345kV	DISIS STAGE
GEN-2015-045	20.00	AEPW	Tap Lawton - Sunnyside (Terry Road) 345kV	FACILITY STUDY STAGE
GEN-2015-046	300.00	WAPA	Tande 345kV	FACILITY STUDY STAGE
GEN-2015-047	300.00	OKGE	Sooner 345kV	FACILITY STUDY STAGE
GEN-2015-048	200.00	OKGE	Cleo Corner 138kV	FACILITY STUDY STAGE
GEN-2015-052	300.00	WERE	Tap Open Sky - Rose Hill 345kV	FACILITY STUDY STAGE
GEN-2015-053	50.00	NPPD	Antelope 115kV	FACILITY STUDY STAGE
GEN-2015-055	40.00	WFEC	Erick 138kV	FACILITY STUDY STAGE
GEN-2015-056	101.20	SPS	Crossroads 345kV	FACILITY STUDY STAGE
GEN-2015-057	100.00	OKGE	Minco 345kV	FACILITY STUDY STAGE
GEN-2015-058	50.00	SPS	Atoka 115kV	DISIS STAGE
GEN-2015-059	6.30	OKGE	Minco 345kV	FACILITY STUDY STAGE

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GEN-2015-060	250.50	OKGE	Woodward EHV 138kV	FACILITY STUDY STAGE
GEN-2015-061	200.00	SUNCMKEC	Mingo 345kV	FACILITY STUDY STAGE
GEN-2015-062	4.50	OKGE	Tap and Tie South 4th - Bunch Creek & Enid Tap - Fairmont (GEN-2012-033T) 138kV	FACILITY STUDY STAGE
GEN-2015-063	300.00	OKGE	Tap Woodring - Mathewson 345kV	FACILITY STUDY STAGE
GEN-2015-064	197.80	SUNCMKEC	Mingo 115kV	FACILITY STUDY STAGE
GEN-2015-065	202.40	SUNCMKEC	Mingo 345kV	FACILITY STUDY STAGE
GEN-2015-066	248.40	OKGE	Tap Cleveland - Sooner 345kV	FACILITY STUDY STAGE
GEN-2015-067	150.00	OKGE	Sooner 138kV	FACILITY STUDY STAGE
GEN-2015-068	300.00	SPS	TUCO Interchange 345kV	FACILITY STUDY STAGE
GEN-2015-069	300.00	WERE	Union Ridge 230kV	FACILITY STUDY STAGE
GEN-2015-071	200.00	AEPW	Chisholm 345kV	FACILITY STUDY STAGE
GEN-2015-073	200.10	WERE	Emporia Energy Center 345kV	FACILITY STUDY STAGE
GEN-2015-075	51.50	SPS	Carlisle 69kV	FACILITY STUDY STAGE
GEN-2015-076	158.40	NPPD	Belden 115kV	FACILITY STUDY STAGE
GEN-2015-078	50.10	SPS	Mustang 115kV	DISIS STAGE
GEN-2015-079	129.20	SPS	Tap Yoakum - Hobbs Interchange 230kV	FACILITY STUDY STAGE
GEN-2015-080	129.20	SPS	Tap Yoakum - Hobbs Interchange 230kV	FACILITY STUDY STAGE
GEN-2015-081	180.00	OKGE	Tap Woodward - Tatonga (GEN-2011-051 Tap) 345kV	FACILITY STUDY STAGE
GEN-2015-082	200.00	OKGE	Tap Hitchland - Woodward Dbl Ckt (GEN-2011-014 Tap) 345kV	DISIS STAGE
GEN-2015-083	125.00	WERE	Belle Plain 138kV	FACILITY STUDY STAGE
GEN-2015-084	51.30	AEPW	Hollis 138kV	FACILITY STUDY STAGE
GEN-2015-085	122.40	AEPW	Altus Junction 138kV	FACILITY STUDY STAGE
GEN-2015-087	66.00	NPPD	Tap Fairbury - Hebron 115kV	FACILITY STUDY STAGE
GEN-2015-088	300.00	NPPD	Tap Moore - Pauline 345kV	FACILITY STUDY STAGE
GEN-2015-089	200.00	WAPA	Utica 230kV	DISIS STAGE
GEN-2015-090	220.00	WERE	Tap Thistle - Wichita 345kV Dbl CKT	FACILITY STUDY STAGE
GEN-2015-091	101.20	WAPA	Daglum 230kV	FACILITY STUDY STAGE
GEN-2015-092	250.00	AEPW	Tap Lawton - Sunnyside (Terry Road) 345kV	FACILITY STUDY STAGE
GEN-2015-093	250.00	OKGE	Gracemont 345kV	FACILITY STUDY STAGE
GEN-2015-095	176.00	WFEC	Tap Rose Valley - Mooreland 138kV	FACILITY STUDY STAGE
GEN-2015-096	150.00	WAPA	Tap Belfied - Rhame 230kV	FACILITY STUDY STAGE
GEN-2015-097	100.00	WAPA	Groton 115kV	FACILITY STUDY STAGE
GEN-2015-098	100.00	WAPA	Mingusville 230kV	FACILITY STUDY STAGE
GEN-2016-001	300.30	OKGE	Tap Badger - Woodward 345kV	DISIS STAGE
GEN-2016-002	74.00	SPS	Happy Interchange 115kV	DISIS STAGE
GEN-2016-003	248.40	OKGE	Tap Badger - Woodward 345kV	DISIS STAGE
GEN-2016-004	202.00	WAPA	Leland Olds 230kV	DISIS STAGE
GEN-2016-005	150.00	SUNCMKEC	Tap Clark County - Thistle 345kV	DISIS STAGE
GEN-2016-007	100.00	WAPA	Valley City 115kV	DISIS STAGE
GEN-2016-008	40.00	WFEC	Granite 69kV	DISIS STAGE
GEN-2016-009	29.00	OKGE	Osage 69kV	DISIS STAGE
GEN-2016-012	200.00	WERE	Tap Wolf Creek - LaCygne 345kV	DISIS STAGE
GEN-2016-013	10.00	EMDE	La Russell 161kV	DISIS STAGE
GEN-2016-014	10.00	EMDE	La Russell 161kV	DISIS STAGE
GEN-2016-015	100.00	SPS	Andrews 230kV	DISIS STAGE
GEN-2016-016	78.20	MIDW	North Kinsley 115kV	DISIS STAGE
GEN-2016-017	250.70	WAPA	Tap Fort Thompson - Leland Olds 345kV	DISIS STAGE
GEN-2016-020	150.00	WFEC	Mooreland 138kV	DISIS STAGE

Request	Amount	Area	Requested/Proposed Point of Interconnection	Status or In-Service Date
GEN-2016-021	300.00	NPPD	Hoskins 345kV	DISIS STAGE
GEN-2016-022	151.80	OKGE	Ranch Road 345kV	DISIS STAGE
GEN-2016-023	150.50	WAPA	Tap Laramie River – Sidney 345kV	DISIS STAGE
GEN-2016-024	50.00	WERE	Midian 138kV	DISIS STAGE
GEN-2016-028	100.00	AEPW	Clayton 138kV	DISIS STAGE
GEN-2016-029	150.50	WAPA	Tap Laramie River – Sidney 345kV	DISIS STAGE
GEN-2016-030	100.00	OKGE	Brown 138kV	DISIS STAGE
GEN-2016-031	1.50	OKGE	Ranch Road 345kV	DISIS STAGE
GEN-2016-032	200.00	OKGE	Tap Marshall - Cottonwood Creek 138kV	DISIS STAGE
GEN-2016-034	90.00	WAPA	Tap Laramie River – Sidney 345kV	DISIS STAGE
GEN-2016-037	300.00	AEPW	Tap Chisholm - Gracemont 345kV	DISIS STAGE
GEN-2016-038	300.00	SPS	Harrington 230kV	DISIS STAGE
GEN-2016-039	112.00	SPS	Swisher 115kV	DISIS STAGE
GEN-2016-040	18.40	KCPL	Tap Nebraska City – Sibley 345kV	DISIS STAGE
GEN-2016-041	100.00	SPS	Hitchland 345kV	DISIS STAGE
GEN-2016-042	20.90	AEPW	Tap Lawton - Sunnyside 345kV	DISIS STAGE
GEN-2016-043	230.00	NPPD	Hoskins 345kV	DISIS STAGE
GEN-2016-044	400.00	WAPA	Tap Groton - Leland Olds 345kV	DISIS STAGE
GEN-2016-045	500.00	OKGE	Mathewson 345kV	DISIS STAGE
GEN-2016-046	299.00	SUCMKEC	Tap Clark County - Ironwood 345kV	DISIS STAGE
GEN-2016-047	402.00	OKGE	Mustang 69kV	DISIS STAGE
GEN-2016-048	74.00	OKGE	Sooner 138kV	DISIS STAGE
GEN-2016-049	310.00	SUCMKEC	Tap Spearville - Post Rock 345kV	DISIS STAGE
GEN-2016-050	250.70	NPPD	Tap Axtell - Post Rock 345kV	DISIS STAGE
GEN-2016-051	9.80	AEPW	Tap Clinton Junction - Weatherford Southeast 138kV	DISIS STAGE
GEN-2016-052	3.30	WAPA	Hilken 230kV	DISIS STAGE
GEN-2016-053	3.30	WAPA	Hilken 230kV	DISIS STAGE
GEN-2016-054	3.40	WAPA	Wessington Springs 230kV	DISIS STAGE
GEN-2016-055	126.50	NPPD	Tap Pauline - Hildreth (Rosemont) 115kV	DISIS STAGE
GEN-2016-056	200.00	SPS	Carlisle 230kV	DISIS STAGE
GEN-2016-057	500.00	OKGE	Mathewson 345kV	DISIS STAGE
GEN-2016-058	200.00	SPS	Yoakum 345kV	DISIS STAGE
GEN-2016-059	300.00	SPS	Harrington 230kV	DISIS STAGE
GEN-2016-060	25.00	WERE	Belle Plain 138kV	DISIS STAGE
GEN-2016-061	250.70	OKGE	Tap Woodring - Sooner 345kV	DISIS STAGE
GEN-2016-062	250.70	SPS	Andrews 230kV	DISIS STAGE
GEN-2016-063	200.00	OKGE	Tap Sunnyside – Hugo 345kV	DISIS STAGE
GEN-2016-064	116.00	NPPD	Tap Pauline - Hildreth (Rosemont) 115kV	DISIS STAGE
GEN-2016-065	6.80	WAPA	Tap Belfield - Rhame (Daglum) 230kV	DISIS STAGE
GEN-2016-066	13.00	WAPA	Tap Belfield - Rhame (Daglum) 230kV	DISIS STAGE
GEN-2016-067	73.60	SUCMKEC	Mingo 345kV	DISIS STAGE
GEN-2016-068	250.00	OKGE	Woodring 345kV	DISIS STAGE
GEN-2016-069	31.35	SPS	Chaves County 115kV	DISIS STAGE
GEN-2016-070	5.30	SPS	Martin 115kV	DISIS STAGE
GEN-2016-071	200.10	OKGE	Chilocco 138kV	DISIS STAGE
GEN-2016-072	300.00	OKGE	Tap Hunter - Renfrow 345kV	DISIS STAGE
GEN-2016-073	220.00	WERE	Tap Thistle – Wichita 345kV Dbl CKT	DISIS STAGE
GEN-2016-075	50.00	WAPA	Tap Fort Thompson - Grand Island 345kV	DISIS STAGE
Gray County Wind (Montezuma)	110.00	SUNCMKEC	Gray County Tap 115kV	On-Line
J003	20.00	MDU	Baker 115kV	MISO Queued Request

Request	Amount	Area	Requested/Proposed Point of Interconnection	Status or In-Service Date
J249	180.00	MDU	MDU Tatanka 230kV	MISO Queued Request
J262	100.00	OTP	Jamestown 345	MISO Queued Request
J263	100.00	OTP	Jamestown 345	MISO Queued Request
J290	150.00	XEL	Tap Glenboro South - Rugby 230kV	MISO Queued Request
J316	150.00	MDU	MDU 230 kV Tatanka-Ellendale line	MISO Queued Request
J436	150.00	OTP	Big Stone South 345kV	MISO Queued Request
J437	150.00	OTP	Big Stone South 345kV	MISO Queued Request
J442	200.00	OTP	Big Stone 230 kV	MISO Queued Request
Llano Estacado (White Deer)	80.00	SPS	Llano Wind 115kV	On-Line
MPC01200	44.00	OTP	Sidney 230kV	Minnkota Queued Request
MPC02100	100.00	OTP	Sidney 230kV	Minnkota Queued Request
NPPD Distributed (Broken Bow)	8.30	NPPD	Broken Bow 115kV	On-Line
NPPD Distributed (Buffalo County Solar)	10.00	NPPD	Kearney Northeast	On-Line
NPPD Distributed (Burt County Wind)	12.00	NPPD	Tekamah & Oakland 115kV	On-Line
NPPD Distributed (Burwell)	3.00	NPPD	Ord 115kV	On-Line
NPPD Distributed (Columbus Hydro)	45.00	NPPD	Columbus 115kV	On-Line
NPPD Distributed (North Platte - Lexington)	54.00	NPPD	Multiple: Jeffrey 115kV, John_1 115kV, John_2 115kV	On-Line
NPPD Distributed (Ord)	11.90	NPPD	Ord 115kV	On-Line
NPPD Distributed (Stuart)	2.10	NPPD	Ainsworth 115kV	On-Line
SPS Distributed (Dumas 19th St)	20.00	SPS	Dumas 19th Street 115kV	On-Line
SPS Distributed (Etter)	20.00	SPS	Etter 115kV	On-Line
SPS Distributed (Hopi)	10.00	SPS	Hopi 115kV	On-Line
SPS Distributed (Jal)	10.00	SPS	S Jal 115kV	On-Line
SPS Distributed (Lea Road)	10.00	SPS	Lea Road 115kV	On-Line
SPS Distributed (Monument)	10.00	SPS	Monument 115kV	On-Line
SPS Distributed (Moore E)	25.00	SPS	Moore East 115kV	On-Line
SPS Distributed (Ocotillo)	10.00	SPS	S_Jal 115kV	On-Line
SPS Distributed (Sherman)	20.00	SPS	Sherman 115kV	On-Line
SPS Distributed (Spearman)	10.00	SPS	Spearman 69kV	On-Line
SPS Distributed (TC-Texas County)	20.00	SPS	Texas County 115kV	On-Line
SPS Distributed (Yuma)	2.57	SPS	SP-Yuma 69kV	On-Line
Total:	53,189.4			

10.3 C: Study Groupings

See next page.

C. Study Groups

GROUP 1: WOODWARD AREA			
Request	Capacity	Area	Proposed Point of Interconnection
GEN-2001-014	96.00	WFEC	Ft Supply 138kV
GEN-2001-037	100.00	OKGE	FPL Moreland Tap 138kV
GEN-2005-008	120.00	OKGE	Woodward 138kV
GEN-2006-024S	19.80	WFEC	Buffalo Bear Tap 69kV
GEN-2006-046	131.00	OKGE	Dewey 138kV
GEN-2007-021	201.00	OKGE	Tatonga 345kV
GEN-2007-043	200.00	OKGE	Minco 345kV
GEN-2007-044	300.00	OKGE	Tatonga 345kV
GEN-2007-050	170.00	OKGE	Woodward EHV 138kV
GEN-2007-062	765.00	OKGE	Woodward EHV 345kV
GEN-2008-003	101.00	OKGE	Woodward EHV 138kV
GEN-2008-044	197.80	OKGE	Tatonga 345kV
GEN-2010-011	29.70	OKGE	Tatonga 345kV
GEN-2010-040	300.00	OKGE	Cimarron 345kV
GEN-2011-010	100.80	OKGE	Minco 345kV
GEN-2011-019	299.00	OKGE	Woodward 345kV
GEN-2011-020	299.00	OKGE	Woodward 345kV
GEN-2011-051	104.40	OKGE	Tap Woodward - Tatonga 345kV (GEN-2011-051 Tap)
GEN-2011-054	300.00	OKGE	Cimarron 345kV
GEN-2014-002	10.50	OKGE	Tatonga 345kV (GEN-2007-021 POI)
GEN-2014-003	15.80	OKGE	Tatonga 345kV (GEN-2007-044 POI)
GEN-2014-005	5.70	OKGE	Minco 345kV (GEN-2011-010 POI)
GEN-2014-020	100.00	AEPW	Tuttle 138kV
GEN-2014-056	250.00	OKGE	Minco 345kV
GEN-2015-029	161.00	OKGE	Tatonga 345kV
GEN-2015-038	303.60	OKGE	Cimarron 345kV
GEN-2015-048	200.00	OKGE	Cleo Corner 138kV
GEN-2015-057	100.00	OKGE	Minco 345kV
GEN-2015-059	6.30	OKGE	Minco 345kV
GEN-2015-060	250.50	OKGE	Woodward EHV 138kV
GEN-2015-081	180.00	OKGE	Tap Woodward - Tatonga (GEN-2011-051 Tap) 345kV
GEN-2015-093	250.00	OKGE	Gracemont 345kV
GEN-2015-095	176.00	WFEC	Tap Rose Valley - Mooreland 138kV
GEN-2016-003	248.40	OKGE	Tap Badger - Woodward 345kV
GEN-2016-020	150.00	WFEC	Mooreland 138kV
GEN-2016-045	500.00	OKGE	Mathewson 345kV
GEN-2016-047	402.00	OKGE	Mustang 69kV
GEN-2016-057	500.00	OKGE	Mathewson 345kV
PRIOR QUEUED SUBTOTAL	7,644.30		
AREA TOTAL	7,644.30		

GROUP 2: HITCHLAND AREA			
Request	Capacity	Area	Proposed Point of Interconnection
ASGI-2011-002	20.00	SPS	Herring 115kV
ASGI-2013-001	11.50	SPS	PanTex South 115kV
GEN-2002-008	240.00	SPS	Hitchland 345kV
GEN-2002-009	80.00	SPS	Hansford 115kV
GEN-2002-022	240.00	SPS	Bushland 230kV
GEN-2003-020	160.00	SPS	Martin 115kV
GEN-2006-020S	18.90	SPS	DWS Frisco 115kV
GEN-2006-044	370.00	SPS	Hitchland 345kV
GEN-2007-046	200.00	SPS	Hitchland 115kV
GEN-2008-047	300.00	OKGE	Beaver County 345kV
GEN-2008-051	322.00	SPS	Potter County 345kV
GEN-2010-001	300.00	OKGE	Beaver County 345kV
GEN-2010-014	358.80	SPS	Hitchland 345kV
GEN-2011-014	201.00	OKGE	Tap Hitchland - Woodward Dbl Ckt (GEN-2011-014 Tap) 345kV
GEN-2011-022	299.00	SPS	Hitchland 345kV
GEN-2013-030	300.00	OKGE	Beaver County 345kV
GEN-2014-037	200.00	SPS	Tap Hitchland - Beaver County Dbl Ckt (Optima) 345kV
GEN-2015-082	200.00	OKGE	Tap Hitchland - Woodward Dbl Ckt (GEN-2011-014 Tap) 345kV
GEN-2016-001	300.30	OKGE	Tap Badger - Woodward 345kV
GEN-2016-041	100.00	SPS	Hitchland 345kV
GEN-2016-070	5.30	SPS	Martin 115kV
Llano Estacado (White Deer)	80.00	SPS	Llano Wind 115kV
SPS Distributed (Dumas 19th St)	20.00	SPS	Dumas 19th Street 115kV
SPS Distributed (Etter)	20.00	SPS	Etter 115kV
SPS Distributed (Moore E)	25.00	SPS	Moore East 115kV
SPS Distributed (Sherman)	20.00	SPS	Sherman 115kV
SPS Distributed (Spearman)	10.00	SPS	Spearman 69kV
SPS Distributed (TC-Texas County)	20.00	SPS	Texas County 115kV
PRIOR QUEUED SUBTOTAL	4,421.80		
AREA TOTAL	4,421.80		

GROUP 3: SPEARVILLE AREA			
Request	Capacity	Area	Proposed Point of Interconnection
ASGI-2012-006	22.50	SUNCMKEC	Tap Hugoton - Rolla 69kV
ASGI-2015-001	6.13	SUNCMKEC	Ninnescah 115kV
GEN-2001-039A	105.00	SUNCMKEC	Shooting Star Tap 115kV
GEN-2002-025A	150.00	SUNCMKEC	Spearville 230kV
GEN-2004-014	154.50	SUNCMKEC	Spearville 230kV
GEN-2005-012	250.00	SUNCMKEC	Ironwood 345kV
GEN-2006-021	101.00	SUNCMKEC	Flat Ridge Tap 138kV
GEN-2007-040	200.00	SUNCMKEC	Buckner 345kV
GEN-2008-018	250.00	SPS	Finney 345kV
GEN-2008-079	99.20	SUNCMKEC	Crooked Creek 115kV
GEN-2008-124	200.10	SUNCMKEC	Ironwood 345kV
GEN-2010-009	165.60	SUNCMKEC	Buckner 345kV
GEN-2010-045	197.80	SUNCMKEC	Buckner 345kV
GEN-2011-008	600.00	SUNCMKEC	Clark County 345kV
GEN-2011-016	200.10	SUNCMKEC	Ironwood 345kV
GEN-2012-007	120.00	SUNCMKEC	Rubart 115kV
GEN-2012-024	180.00	SUNCMKEC	Clark County 345kV
GEN-2013-010	99.00	SUNCMKEC	Tap Spearville - Post Rock (North of GEN-2011-017 Tap) 345kV
GEN-2015-021	20.00	SUNCMKEC	Johnson Corner 115kV
GEN-2015-027	4.90	SUNCMKEC	Crooked Creek 115kV
GEN-2016-005	150.00	SUNCMKEC	Tap Clark County - Thistle 345kV
GEN-2016-016	78.20	MIDW	North Kinsley 115kV
GEN-2016-046	299.00	SUNCMKEC	Tap Clark County - Ironwood 345kV
GEN-2016-049	310.00	SUNCMKEC	Tap Spearville - Post Rock 345kV
Gray County Wind (Montezuma)	110.00	SUNCMKEC	Gray County Tap 115kV
PRIOR QUEUED SUBTOTAL	4,073.03		
AREA TOTAL	4,073.03		

GROUP 4: NORTHWEST KANSAS AREA			
Request	Capacity	Area	Proposed Point of Interconnection
ASGI-2013-004	36.60	SUNCMKEC	Morris 115kV
GEN-2001-039M	100.00	SUNCMKEC	Central Plains Tap 115kV
GEN-2003-006A	200.00	SUNCMKEC	Elm Creek 230kV
GEN-2003-019	250.00	MIDW	Smoky Hills Tap 230kV
GEN-2006-031	75.00	MIDW	Knoll 115kV
GEN-2008-092	200.60	MIDW	Post Rock 230kV
GEN-2009-008	199.50	MIDW	South Hays 230kV
GEN-2009-020	48.30	MIDW	Walnut Creek 69kV
GEN-2010-048	70.00	MIDW	Tap Beach Station - Redline 115kV
GEN-2010-057	201.00	MIDW	Rice County 230kV
GEN-2013-033	28.00	MIDW	Knoll 115kV
GEN-2014-025	2.40	MIDW	Walnut Creek 69kV
GEN-2014-041	120.80	SUNCMKEC	Arnold 115kV
GEN-2015-061	200.00	SUNCMKEC	Mingo 345kV
GEN-2015-064	197.80	SUNCMKEC	Mingo 115kV
GEN-2015-065	202.40	SUNCMKEC	Mingo 345kV
GEN-2016-067	73.60	SUNCMKEC	Mingo 345kV
PRIOR QUEUED SUBTOTAL	2,206.00		
AREA TOTAL	2,206.00		

GROUP 6: SOUTH TEXAS PANHANDLE/NEW MEXICO AREA

Request	Capacity	Area	Proposed Point of Interconnection
ASGI-2010-010	42.20	SPS	Lovington 115kV
ASGI-2010-020	30.00	SPS	Tap LE-Tatum - LE-Crossroads 69kV
ASGI-2010-021	15.00	SPS	Tap LE-Saunders Tap - LE-Anderson 69kV
ASGI-2011-001	27.30	SPS	Lovington 115kV
ASGI-2011-003	10.00	SPS	Hendricks 69kV
ASGI-2011-004	20.00	SPS	Pleasant Hill 69kV
ASGI-2012-002	18.15	SPS	FE-Clovis Interchange 115kV
ASGI-2013-002	18.40	SPS	FE Tucumcari 115kV
ASGI-2013-003	18.40	SPS	FE Clovis 115kV
ASGI-2013-005	1.65	SPS	FE Clovis 115kV
ASGI-2013-006	2.00	SPS	SP-Erskine 115kV
ASGI-2014-001	2.50	SPS	SP-Erskine 115kV
ASGI-2015-002	2.00	SPS	SP-Yuma 69kV
ASGI-2016-001	2.50	SPS	Wolfforth 115kV
ASGI-2016-002	0.35	SPS	Hurlwood 115kV
ASGI-2016-004	9.60	SPS	
GEN-2001-033	180.00	SPS	San Juan Tap 230kV
GEN-2001-036	80.00	SPS	Norton 115kV
GEN-2006-018	170.00	SPS	TUCO Interchange 230kV
GEN-2006-026	502.00	SPS	Hobbs 230kV & Hobbs 115kV
GEN-2008-022	300.00	SPS	Crossroads 345kV
GEN-2010-006	205.00	SPS	Jones 230kV
GEN-2010-046	56.00	SPS	TUCO Interchange 230kV
GEN-2011-025	80.00	SPS	Tap Floyd County - Crosby County 115kV
GEN-2011-045	205.00	SPS	Jones 230kV
GEN-2011-046	27.00	SPS	Lopez 115kV
GEN-2011-048	175.00	SPS	Mustang 230kV
GEN-2012-001	61.20	SPS	Cirrus Tap 230kV
GEN-2012-020	478.00	SPS	TUCO 230kV
GEN-2012-034	7.00	SPS	Mustang 230kV
GEN-2012-035	7.00	SPS	Mustang 230kV
GEN-2012-036	7.00	SPS	Mustang 230kV
GEN-2012-037	203.00	SPS	TUCO 345kV
GEN-2013-016	203.00	SPS	TUCO 345kV
GEN-2013-022	25.00	SPS	Norton 115kV
GEN-2013-027	150.00	SPS	Tap Tolk - Yoakum 230kV
GEN-2014-012	225.00	SPS	Tap Hobbs Interchange - Andrews 230kV
GEN-2014-033	70.00	SPS	Chaves County 115kV
GEN-2014-034	70.00	SPS	Chaves County 115kV
GEN-2014-035	30.00	SPS	Chaves County 115kV
GEN-2014-040	320.40	SPS	Castro 115kV
GEN-2014-047	40.00	SPS	Crossroads 345kV
GEN-2014-074	152.00	SPS	Tap TUCO Interchange - Oklaunion (GEN-2014-074 Tap) 345kV
GEN-2015-014	150.00	SPS	Tap Cochran - Lehman 115kV
GEN-2015-018	80.00	SPS	Tap Curry County - Bailey 115kV
GEN-2015-020	100.00	SPS	Oasis 115kV
GEN-2015-022	112.00	SPS	Swisher 115kV
GEN-2015-031	150.50	SPS	Tap Amarillo South - Swisher 230kV
GEN-2015-033	152.00	SPS	Tap TUCO Interchange - Oklaunion (GEN-2014-074 Tap) 345kV

GEN-2015-039	50.00	SPS	Tap Deaf Smith - Plant X 230kV
GEN-2015-040	50.10	SPS	Mustang 230kV
GEN-2015-041	5.00	SPS	TUCO Interchange 345kV
GEN-2015-056	101.20	SPS	Crossroads 345kV
GEN-2015-058	50.00	SPS	Atoka 115kV
GEN-2015-068	300.00	SPS	TUCO Interchange 345kV
GEN-2015-075	51.50	SPS	Carlisle 69kV
GEN-2015-078	50.10	SPS	Mustang 115kV
GEN-2015-079	129.20	SPS	Tap Yoakum - Hobbs Interchange 230kV
GEN-2015-080	129.20	SPS	Tap Yoakum - Hobbs Interchange 230kV
GEN-2016-002	74.00	SPS	Happy Interchange 115kV
GEN-2016-015	100.00	SPS	Andrews 230kV
GEN-2016-038	300.00	SPS	Harrington 230kV
GEN-2016-039	112.00	SPS	Swisher 115kV
GEN-2016-056	200.00	SPS	Carlisle 230kV
GEN-2016-058	200.00	SPS	Yoakum 345kV
GEN-2016-059	300.00	SPS	Harrington 230kV
GEN-2016-062	250.70	SPS	Andrews 230kV
GEN-2016-069	31.35	SPS	Chaves County 115kV
SPS Distributed (Hopi)	10.00	SPS	Hopi 115kV
SPS Distributed (Jal)	10.00	SPS	S Jal 115kV
SPS Distributed (Lea Road)	10.00	SPS	Lea Road 115kV
SPS Distributed (Monument)	10.00	SPS	Monument 115kV
SPS Distributed (Ocotillo)	10.00	SPS	S_Jal 115kV
SPS Distributed (Yuma)	2.57	SPS	SP-Yuma 69kV
PRIOR QUEUED SUBTOTAL	7,530.07		
AREA TOTAL	7,530.07		

GROUP 7: SOUTHWEST OKLAHOMA AREA			
Request	Capacity	Area	Proposed Point of Interconnection
GEN-2001-026	74.30	WFEC	Washita 138kV
GEN-2002-005	120.00	WFEC	Red Hills Tap 138kV
GEN-2003-004	100.00	WFEC	Washita 138kV
GEN-2003-005	100.00	WFEC	Anadarko - Paradise (Blue Canyon) 138kV
GEN-2003-022	120.00	AEPW	Weatherford 138kV
GEN-2004-020	27.00	AEPW	Weatherford 138kV
GEN-2004-023	20.60	WFEC	Washita 138kV
GEN-2005-003	30.60	WFEC	Washita 138kV
GEN-2006-002	101.00	AEPW	Sweetwater 230kV
GEN-2006-035	225.00	AEPW	Sweetwater 230kV
GEN-2006-043	99.00	AEPW	Sweetwater 230kV
GEN-2007-052	150.00	WFEC	Anadarko 138kV
GEN-2008-023	150.00	AEPW	Hobart Junction 138kV
GEN-2008-037	101.00	WFEC	Slick Hills 138kV
GEN-2011-037	7.00	WFEC	Blue Canyon 5 138kV
GEN-2011-049	250.70	OKGE	Border 345kV
GEN-2012-028	74.80	WFEC	Gotebo 69kV
GEN-2015-004	52.90	OKGE	Border 345kV
GEN-2015-013	120.00	WFEC	Synder 138kV
GEN-2015-055	40.00	WFEC	Erick 138kV
GEN-2015-071	200.00	AEPW	Chisholm 345kV
GEN-2015-084	51.30	AEPW	Hollis 138kV
GEN-2015-085	122.40	AEPW	Altus Junction 138kV
GEN-2016-008	40.00	WFEC	Granite 69kV
GEN-2016-037	300.00	AEPW	Tap Chisholm - Gracemont 345kV
GEN-2016-051	9.80	AEPW	Tap Clinton Junction - Weatherford Southeast 138kV
PRIOR QUEUED SUBTOTAL	2,687.40		
AREA TOTAL	2,687.40		

GROUP 8: NORTH OKLAHOMA/SOUTH CENTRAL KANSAS AREA			
Request	Capacity	Area	Proposed Point of Interconnection
ASGI-2010-006	150.00	AECI	Remington 138kV
ASGI-2014-014	56.40	GRDA	Ferguson 69kV
ASGI-2015-004	56.36	GRDA	Coffeyville City 69kV
GEN-2002-004	200.00	WERE	Latham 345kV
GEN-2005-013	201.00	WERE	Caney River 345kV
GEN-2007-025	300.00	WERE	Viola 345kV
GEN-2008-013	300.00	OKGE	Hunter 345kV
GEN-2008-021	42.00	WERE	Wolf Creek 345kV
GEN-2008-098	100.80	WERE	Waverly 345kV
GEN-2009-025	59.80	OKGE	Nardins 69kV
GEN-2010-003	100.80	WERE	Waverly 345kV
GEN-2010-005	299.20	WERE	Viola 345kV
GEN-2010-055	4.50	AEPW	Wekiwa 138kV
GEN-2011-057	150.40	WERE	Creswell 138kV
GEN-2012-032	300.00	OKGE	Open Sky 345kV
GEN-2012-033	98.10	OKGE	Tap and Tie South 4th - Bunch Creek & Enid Tap - Fairmont (GEN-2012-033T) 138kV
GEN-2012-041	121.50	OKGE	Ranch Road 345kV
GEN-2013-012	147.00	OKGE	Redbud 345kV
GEN-2013-028	559.50	GRDA	Tap N Tulsa - GRDA 1 345kV

GEN-2013-029	300.00	OKGE	Renfrow 345kV
GEN-2014-001	200.60	WERE	Tap Wichita - Emporia Energy Center (GEN-2014-001 Tap) 345kV
GEN-2014-028	35.00	EMDE	Riverton 161kV
GEN-2014-064	248.40	OKGE	Otter 138kV
GEN-2015-001	200.00	OKGE	Ranch Road 345kV
GEN-2015-015	154.60	OKGE	Tap Medford Tap - Coyote 138kV
GEN-2015-016	200.00	KCPL	Tap Marmaton - Centerville 161kV
GEN-2015-024	220.00	WERE	Tap Thistle - Wichita 345kV Dbl CKT
GEN-2015-025	220.00	WERE	Tap Thistle - Wichita 345kV Dbl CKT
GEN-2015-030	200.10	OKGE	Sooner 345kV
GEN-2015-034	200.00	OKGE	Ranch Road 345kV
GEN-2015-047	300.00	OKGE	Sooner 345kV
GEN-2015-052	300.00	WERE	Tap Open Sky - Rose Hill 345kV
GEN-2015-062	4.50	OKGE	Tap and Tie South 4th - Bunch Creek & Enid Tap - Fairmont (GEN-2012-033T) 138kV
GEN-2015-063	300.00	OKGE	Tap Woodring - Mathewson 345kV
GEN-2015-066	248.40	OKGE	Tap Cleveland - Sooner 345kV
GEN-2015-067	150.00	OKGE	Sooner 138kV
GEN-2015-069	300.00	WERE	Union Ridge 230kV
GEN-2015-073	200.10	WERE	Emporia Energy Center 345kV
GEN-2015-083	125.00	WERE	Belle Plain 138kV
GEN-2015-090	220.00	WERE	Tap Thistle - Wichita 345kV Dbl CKT
GEN-2016-009	29.00	OKGE	Osage 69kV
GEN-2016-012	200.00	WERE	Tap Wolf Creek - LaCygne 345kV
GEN-2016-022	151.80	OKGE	Ranch Road 345kV
GEN-2016-024	50.00	WERE	Midian 138kV
GEN-2016-031	1.50	OKGE	Ranch Road 345kV
GEN-2016-032	200.00	OKGE	Tap Marshall - Cottonwood Creek 138kV
GEN-2016-048	74.00	OKGE	Sooner 138kV
GEN-2016-060	25.00	WERE	Belle Plain 138kV
GEN-2016-061	250.70	OKGE	Tap Woodring - Sooner 345kV
GEN-2016-068	250.00	OKGE	Woodring 345kV
GEN-2016-071	200.10	OKGE	Chilocco 138kV
GEN-2016-072	300.00	OKGE	Tap Hunter - Renfrow 345kV
GEN-2016-073	220.00	WERE	Tap Thistle - Wichita 345kV Dbl CKT
PRIOR QUEUED SUBTOTAL	9,526.16		
GEN-2016-010	134.00	WERE/SUNCMK	Viola 345kV/Harper 138kV
GEN-2016-033	74.00	OKGE	Imo 138kV
CURRENT CLUSTER SUBTOTAL	208.00		
AREA TOTAL	9,734.16		

GROUP 9: NEBRASKA AREA

Request	Capacity	Area	Proposed Point of Interconnection
GEN-2002-023N	0.80	NPPD	Harmony 115kV
GEN-2003-021N	75.00	NPPD	Ainsworth Wind Tap 115kV
GEN-2004-023N	75.00	NPPD	Columbus Co 115kV
GEN-2006-020N	42.00	NPPD	Bloomfield 115kV
GEN-2006-037N1	75.00	NPPD	Broken Bow 115kV
GEN-2006-038N005	80.00	NPPD	Broken Bow 115kV
GEN-2006-038N019	80.00	NPPD	Petersburg North 115kV
GEN-2006-044N	40.50	NPPD	North Petersburg 115kV
GEN-2007-011N08	81.00	NPPD	Bloomfield 115kV
GEN-2007-017IS	166.00	WAPA	Ft Thompson-Grand Island 345kV
GEN-2007-018IS	234.00	WAPA	Ft Thompson-Grand Island 345kV

GEN-2008-086N02	201.00	NPPD	Meadow Grove 230kV
GEN-2008-1190	60.00	OPPD	S1399 161kV
GEN-2008-123N	89.70	NPPD	Tap Pauline - Hildreth (Rosemont) 115kV
GEN-2009-040	73.80	WERE	Marshall 115kV
GEN-2010-041	10.50	OPPD	S1399 161kV
GEN-2010-051	200.00	NPPD	Tap Hoskins - Twin Church (Dixon County) 230kV
GEN-2011-018	73.60	NPPD	Steele City 115kV
GEN-2011-027	120.00	NPPD	Tap Hoskins - Twin Church (Dixon County) 230kV
GEN-2011-056	3.60	NPPD	Jeffrey 115kV
GEN-2011-056A	3.60	NPPD	John 1 115kV
GEN-2011-056B	4.50	NPPD	John 2 115kV
GEN-2012-021	4.80	LES	Terry Bundy Generating Station 115kV
GEN-2013-002	50.60	LES	Tap Sheldon - Folsom & Pleasant Hill (GEN-2013-002 Tap) 115kV CKT 2
GEN-2013-008	1.20	NPPD	Steele City 115kV
GEN-2013-019	73.60	LES	Tap Sheldon - Folsom & Pleasant Hill (GEN-2013-002 Tap) 115kV CKT 2
GEN-2013-032	204.00	NPPD	Antelope 115kV
GEN-2014-004	4.00	NPPD	Steele City 115kV (GEN-2011-018 POI)
GEN-2014-013	73.50	NPPD	Meadow Grove (GEN-2008-086N2 Sub) 230kV
GEN-2014-031	35.80	NPPD	Meadow Grove 230kV
GEN-2014-032	10.20	NPPD	Meadow Grove 230kV
GEN-2014-039	73.40	NPPD	Friend 115kV
GEN-2015-007	160.00	NPPD	Hoskins 345kV
GEN-2015-023	300.70	NPPD	Holt County 345kV
GEN-2015-053	50.00	NPPD	Antelope 115kV
GEN-2015-076	158.40	NPPD	Belden 115kV
GEN-2015-087	66.00	NPPD	Tap Fairbury - Hebron 115kV
GEN-2015-088	300.00	NPPD	Tap Moore - Pauline 345kV
GEN-2016-021	300.00	NPPD	Hoskins 345kV
GEN-2016-023	150.50	WAPA	Tap Laramie River – Sidney 345kV
GEN-2016-029	150.50	WAPA	Tap Laramie River – Sidney 345kV
GEN-2016-034	90.00	WAPA	Tap Laramie River – Sidney 345kV
GEN-2016-043	230.00	NPPD	Hoskins 345kV
GEN-2016-050	250.70	NPPD	Tap Axtell - Post Rock 345kV
GEN-2016-055	126.50	NPPD	Tap Pauline - Hildreth (Rosemont) 115kV
GEN-2016-064	116.00	NPPD	Tap Pauline - Hildreth (Rosemont) 115kV
GEN-2016-075	50.00	WAPA	Tap Fort Thompson - Grand Island 345kV
NPPD Distributed (Broken Bow)	8.30	NPPD	Broken Bow 115kV
NPPD Distributed (Buffalo County Solar)	10.00	NPPD	Kearney Northeast
NPPD Distributed (Burt County Wind)	12.00	NPPD	Tekamah & Oakland 115kV
NPPD Distributed (Burwell)	3.00	NPPD	Ord 115kV
NPPD Distributed (Columbus Hydro)	45.00	NPPD	Columbus 115kV
NPPD Distributed (North Platte - Lexington)	54.00	NPPD	Multiple: Jeffrey 115kV, John_1 115kV, John_2 115kV
NPPD Distributed (Ord)	11.90	NPPD	Ord 115kV
NPPD Distributed (Stuart)	2.10	NPPD	Ainsworth 115kV
PRIOR QUEUED SUBTOTAL	4,966.30		
GEN-2016-026	120.00	NPPD	Callaway 115kV/ Broken Bow 115kV
CURRENT CLUSTER SUBTOTAL	120.00		
AREA TOTAL	5,086.30		

GROUP 10: SOUTHEAST OKLAHOMA/NORTHEAST TEXAS AREA			
Request	Capacity	Area	Proposed Point of Interconnection
AREA TOTAL	0.00		

GROUP 12: NORTHWEST ARKANSAS AREA			
Request	Capacity	Area	Proposed Point of Interconnection
GEN-2013-011	30.00	AEPW	Turk 138kV
PRIOR QUEUED SUBTOTAL	30.00		
AREA TOTAL	30.00		

GROUP 13: NORTHWEST MISSOURI AREA			
Request	Capacity	Area	Proposed Point of Interconnection
ASGI-2016-003	6.00	KCPL	
GEN-2008-129	80.00	KCPL	Pleasant Hill 161kV
GEN-2010-036	4.60	WERE	6th Street 115kV
GEN-2011-011	50.00	KCPL	Iatan 345kV
GEN-2014-021	300.00	KCPL	Tap Nebraska City - Mullin Creek 345kV
GEN-2015-005	200.10	KCPL	Tap Nebraska City - Sibley 345kV
GEN-2016-013	10.00	EMDE	La Russell 161kV
GEN-2016-014	10.00	EMDE	La Russell 161kV
GEN-2016-040	18.40	KCPL	Tap Nebraska City – Sibley 345kV
PRIOR QUEUED SUBTOTAL	679.10		
AREA TOTAL	679.10		

GROUP 14: SOUTH CENTRAL OKLAHOMA AREA

Request	Capacity	Area	Proposed Point of Interconnection
ASGI-2015-006	9.00	SWPA	Tupelo 138kV
GEN-2011-040	111.00	OKGE	Carter County 138kV
GEN-2011-050	109.80	AEPW	Santa Fe Tap 138kV
GEN-2012-004	41.40	OKGE	Carter County 138kV
GEN-2013-007	100.30	OKGE	Tap Prices Falls - Carter 138kV
GEN-2014-057	250.00	AEPW	Tap Lawton - Sunnyside (Terry Road) 345kV
GEN-2015-036	303.60	OKGE	Johnston County 345kV
GEN-2015-045	20.00	AEPW	Tap Lawton - Sunnyside (Terry Road) 345kV
GEN-2015-092	250.00	AEPW	Tap Lawton - Sunnyside (Terry Road) 345kV
GEN-2016-028	100.00	AEPW	Clayton 138kV
GEN-2016-030	100.00	OKGE	Brown 138kV
GEN-2016-042	20.90	AEPW	Tap Lawton - Sunnyside 345kV
GEN-2016-063	200.00	OKGE	Tap Sunnyside – Hugo 345kV
PRIOR QUEUED SUBTOTAL	1,616.00		
GEN-2016-018	884.00	OKGE	Tap Hugo - Sunnyside 345kV
GEN-2016-019	1,219.00	OKGE	Tap Hugo - Sunnyside 345kV
CURRENT CLUSTER SUBTOTAL	2,103.00		
AREA TOTAL	3,719.00		

GROUP 15: E-SOUTH DAKOTA AREA			
Request	Capacity	Area	Proposed Point of Interconnection
ASGI-2016-005	20.00	WAPA	Tap White Lake - Stickeny 69kV
ASGI-2016-006	20.00	WAPA	Mitchall
ASGI-2016-007	20.00	WAPA	Kimball 69kV
G176	100.00	XEL	Yankee 115kV
G255	100.00	XEL	Yankee 115kV
G586	30.00	XEL	Yankee 115kV
G736	200.00	OTP	Big Stone South 230kV
GEN-2002-009IS	40.00	WAPA	Ft Thompson 69kV [Hyde 69kV]
GEN-2007-013IS	50.00	WAPA	Wessington Springs 230kV
GEN-2007-014IS	100.00	WAPA	Wessington Springs 230kV
GEN-2007-023IS	50.00	WAPA	Formit-Summit 115kV
GEN-2009-001IS	200.00	WAPA	Groton-Watertown 345kV
GEN-2009-018IS	100.00	WAPA	Groton 115kV
GEN-2010-001IS	99.00	WAPA	Bismarck-Glenham 230kV
GEN-2010-003IS	34.00	WAPA	Wessington Springs 230kV
GEN-2012-014IS	99.50	WAPA	Groton 115kV
GEN-2013-001IS	90.00	WAPA	Summit-Watertown 115kV
GEN-2013-009IS	19.50	WAPA	Redfield NW 115kV
GEN-2014-001IS	103.70	WAPA	Newell-Maurine 115kV
GEN-2015-097	100.00	WAPA	Groton 115kV
GEN-2016-017	250.70	WAPA	Tap Fort Thompson - Leland Olds 345kV
J436	150.00	OTP	Big Stone South 345kV
J437	150.00	OTP	Big Stone South 345kV
J442	200.00	OTP	Big Stone 230 kV
PRIOR QUEUED SUBTOTAL	2,326.40		
GEN-2016-036	44.60	WAPA	Granite Falls 115kV
CURRENT CLUSTER SUBTOTAL	44.60		
AREA TOTAL	2,371.00		

GROUP 16: W-NORTH DAKOTA AREA

Request	Capacity	Area	Proposed Point of Interconnection
G359	150.00	MDU	MDU 230 kV system near Ellendale
G380	150.00	OTP	Rugby 115kV
G408	12.00	XEL	Tap McHenry - Souris 115kV
G502	50.60	MP	Milton Young 230kV
G645	50.00	GRE	Ladish 115kV
G723	10.00	MDU	Haskett 115kV
G752	150.00	MDU	Tap Bison - Hettinger 230kV
G788	49.00	GRE	Ladish 115kV
G830	99.00	GRE	GRE McHenry 115kV
GEN-2005-008IS	50.00	WAPA	Hilken 230kV [Ecklund 230kV]
GEN-2006-015IS	50.00	WAPA	Hilken 230kV [Ecklund 230kV]
GEN-2007-015IS	100.00	WAPA	Hilken 230kV [Ecklund 230kV]
GEN-2007-027IS	99.00	WAPA	Bismarck-Garrison 230kV #1
GEN-2009-026IS	110.00	WAPA	Dickenson-Heskett 230kV
GEN-2010-007IS	172.50	WAPA	Antelope Valley 345kV
GEN-2012-006IS	125.01	WAPA	Williston-Ch. Creek 230kV
GEN-2012-012IS	75.00	WAPA	Wolf Point-Circle 115kV
GEN-2014-003IS	91.00	WAPA	Culbertson 115kV
GEN-2014-004IS	384.20	WAPA	Charlie Creek 345kV
GEN-2014-006IS	125.00	WAPA	Williston 115kV
GEN-2014-010IS	150.00	WAPA	Neset 115kV
GEN-2014-014IS	151.50	WAPA	Belfield-Rhame 230kV
GEN-2015-046	300.00	WAPA	Tande 345kV
GEN-2015-091	101.20	WAPA	Daglum 230kV
GEN-2015-096	150.00	WAPA	Tap Belfied - Rhame 230kV
GEN-2015-098	100.00	WAPA	Mingusville 230kV
GEN-2016-004	202.00	WAPA	Leland Olds 230kV
GEN-2016-044	400.00	WAPA	Tap Groton - Leland Olds 345kV
GEN-2016-052	3.30	WAPA	Hilken 230kV
GEN-2016-053	3.30	WAPA	Hilken 230kV
GEN-2016-065	6.80	WAPA	Tap Belfield - Rhame (Daglum) 230kV
GEN-2016-066	13.00	WAPA	Tap Belfield - Rhame (Daglum) 230kV
J003	20.00	MDU	Baker 115kV
J249	180.00	MDU	MDU Tatanka 230kV
J262	100.00	OTP	Jamestown 345
J263	100.00	OTP	Jamestown 345
J290	150.00	XEL	Tap Glenboro South - Rugby 230kV
J316	150.00	MDU	MDU 230 kV Tatanka-Ellendale line
MPC01200	44.00	OTP	Sidney 230kV
MPC02100	100.00	OTP	Sidney 230kV
PRIOR QUEUED SUBTOTAL	4,527.41		
GEN-2016-035	264.50	WAPA	Bismark - Mound City 230kV
CURRENT CLUSTER SUBTOTAL	264.50		
AREA TOTAL	0.00		

GROUP 17: W-SOUTH DAKOTA AREA			
Request	Capacity	Area	Proposed Point of Interconnection
GEN-2006-001IS	10.00	XEL	Marshall 115kV
GEN-2006-002IS	51.00	WAPA	Wessington Springs 230kV
GEN-2006-006IS	10.00	XEL	Marshall 115kV
GEN-2009-006IS	90.00	WAPA	Mission 115kV
GEN-2009-007IS	100.00	WAPA	Mission 115kV
GEN-2009-020AIS	130.50	WAPA	Tripp Junction 115kV
GEN-2012-009IS	99.00	WAPA	Fort Randall 115kV
GEN-2015-089	200.00	WAPA	Utica 230kV
GEN-2016-054	3.40	WAPA	Wessington Springs 230kV
PRIOR QUEUED SUBTOTAL	693.90		
GEN-2016-006	140.00	WAPA	Phillip Tap 230kV
CURRENT CLUSTER SUBTOTAL	140.00		
AREA TOTAL	0.00		

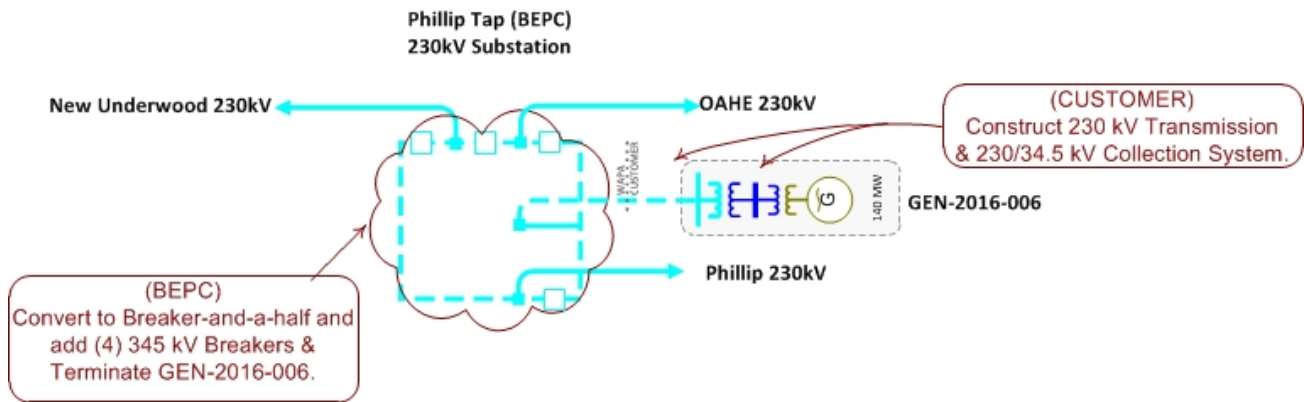
GROUP 18: E-NORTH DAKOTA AREA			
Request	Capacity	Area	Proposed Point of Interconnection
GEN-2002-008IS	40.50	WAPA	Edgeley 115kV [Pomona 115kV]
GEN-2005-003IS	100.00	WAPA	Nelson 115kV
GEN-2007-020IS	16.00	WAPA	Nelson 115kV
GEN-2008-008IS	5.00	WAPA	Nelson 115kV
GEN-2016-007	100.00	WAPA	Valley City 115kV
PRIOR QUEUED SUBTOTAL	261.50		
AREA TOTAL	0.00		

CLUSTER TOTAL (CURRENT STUDY)	2,880.1	MW
PQ TOTAL (PRIOR QUEUED)	53,189.4	MW
CLUSTER TOTAL (INCLUDING PRIOR QUEUED)	56,069.5	MW

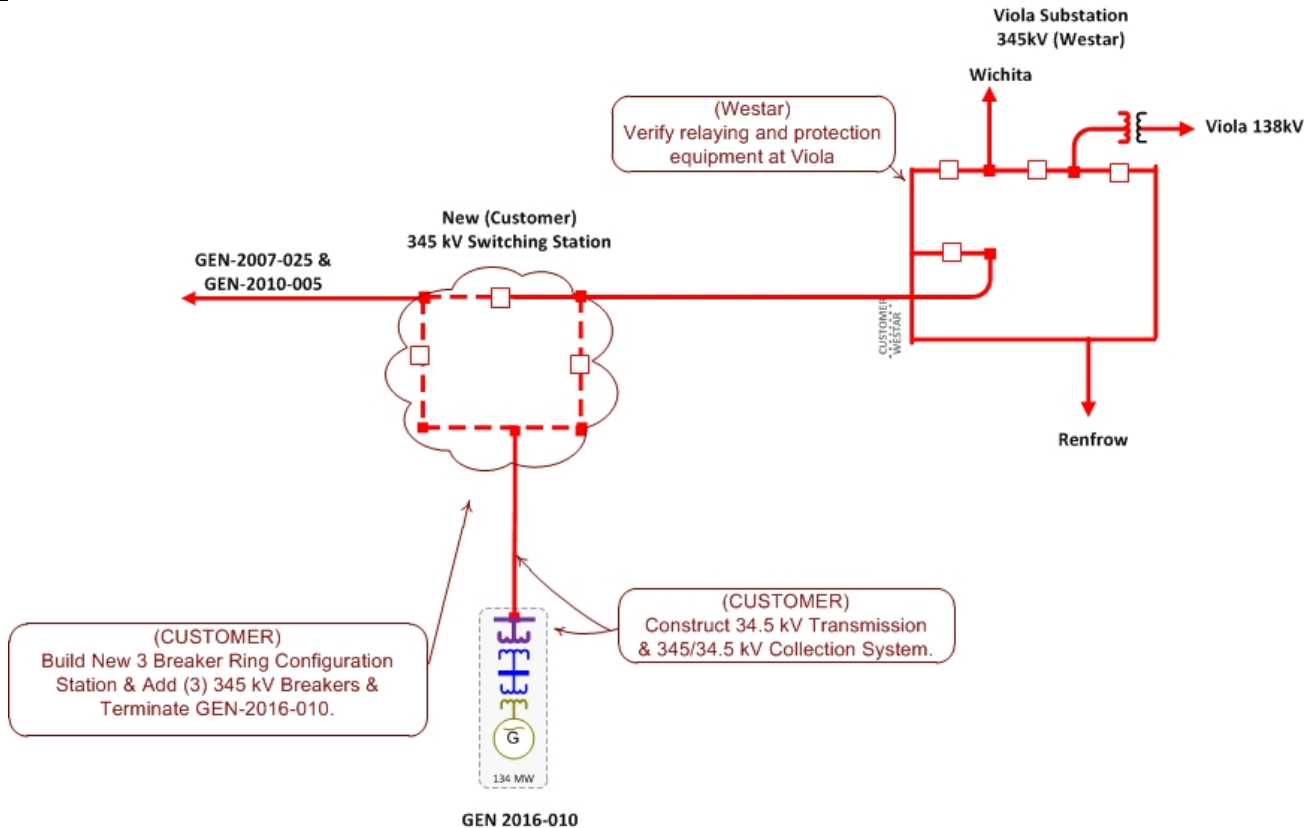
10.4 D: Proposed Point of Interconnection One line Diagrams

See next page.

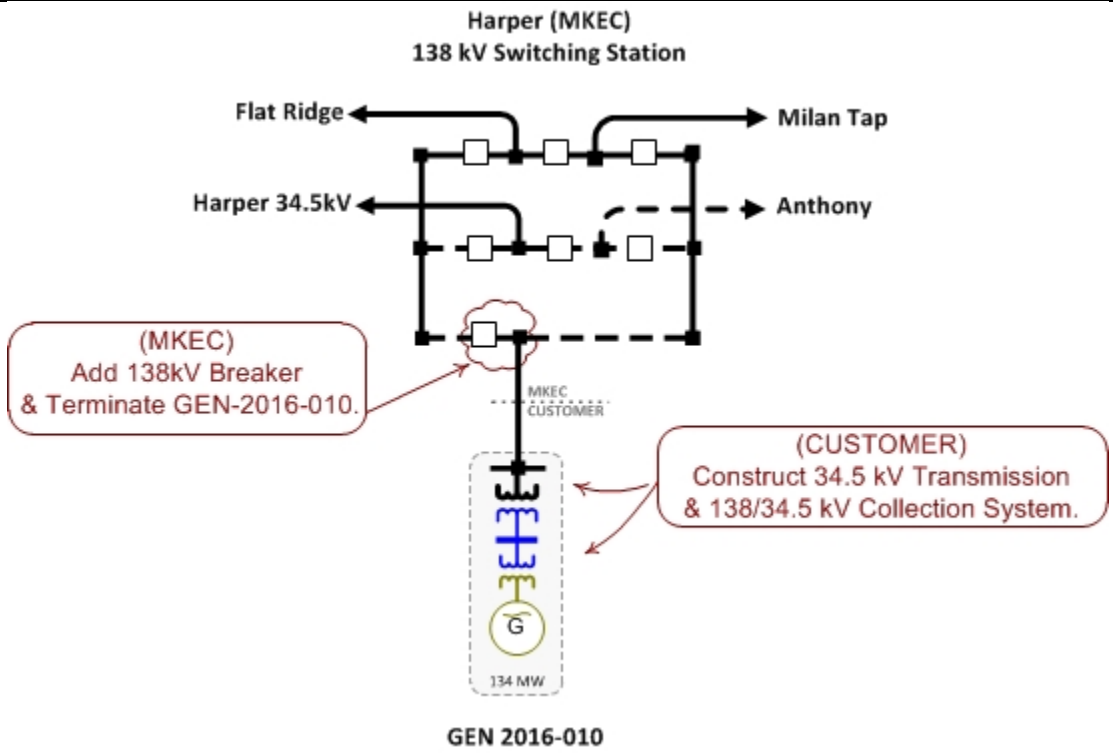
GEN-2016-006 (Phillip Tap 230kV)
Estimated Interconnection Costs: \$6,000,000



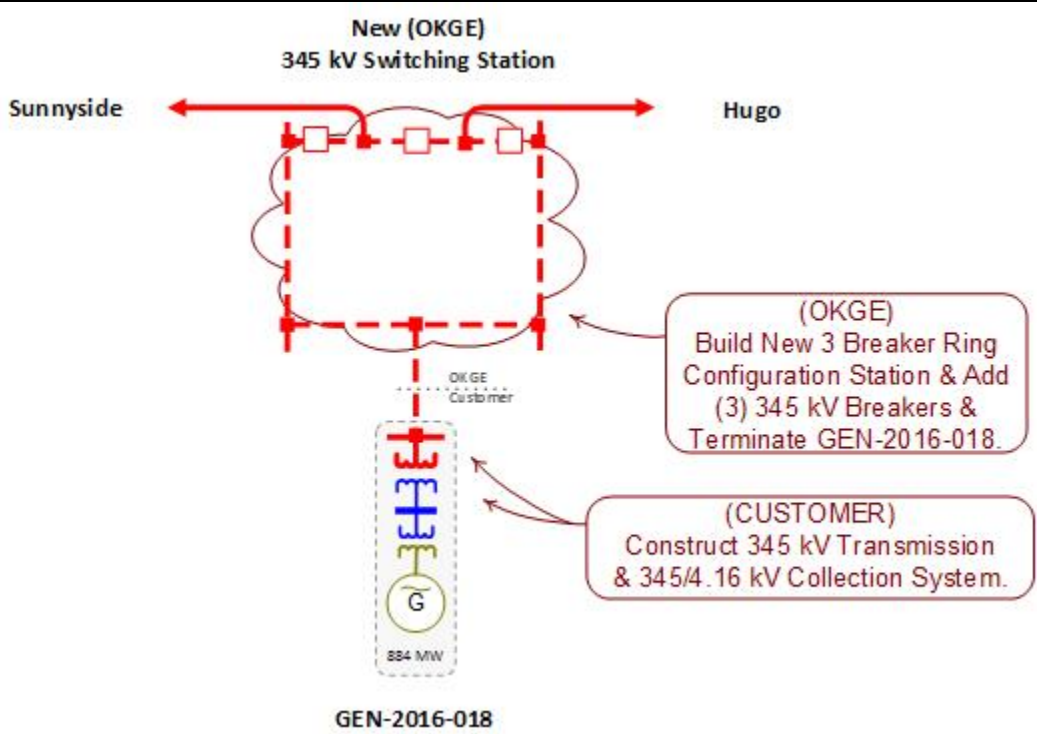
GEN-2016-010 (Viola 345kV)
Estimated Interconnection Costs: \$50,000



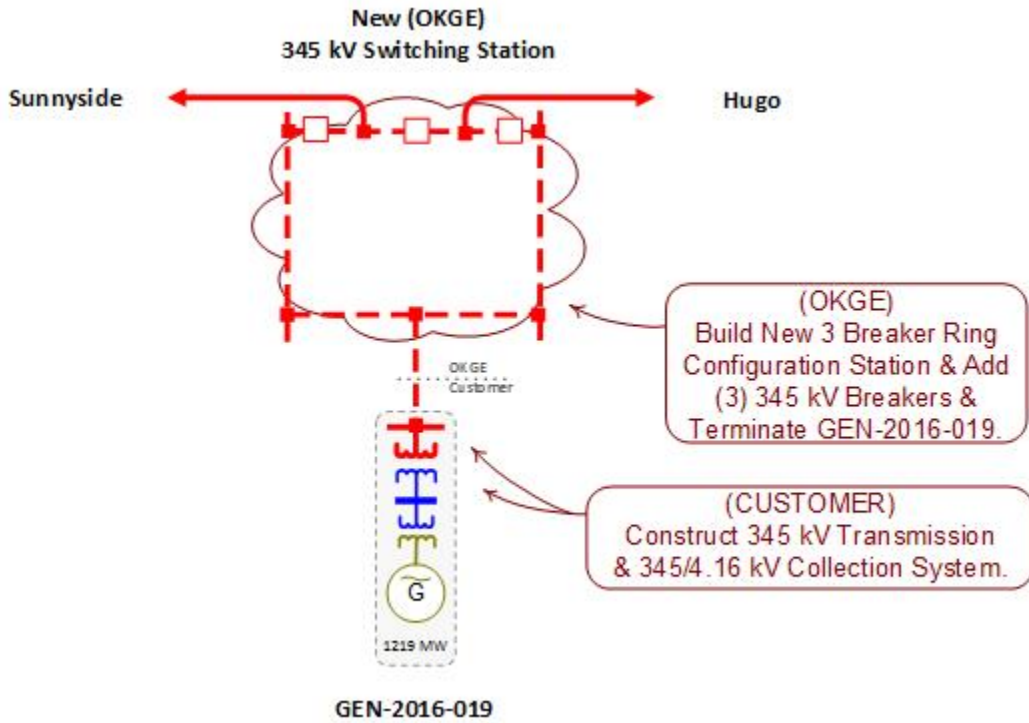
GEN-2016-010 (Harper 138kV)
Estimated Interconnection Costs: \$4,000,000



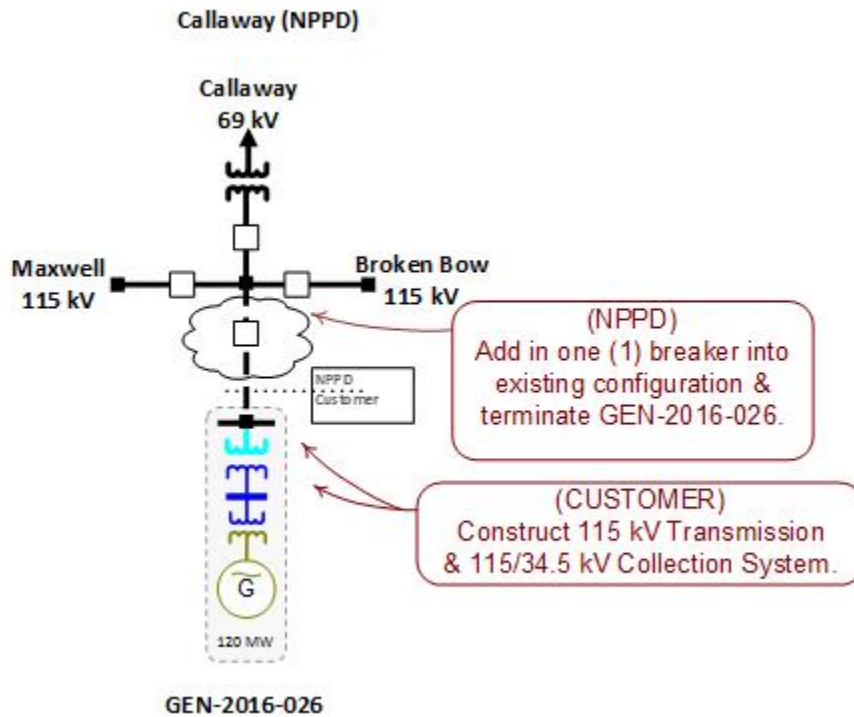
GEN-2016-018 (Tap Hugo – Sunnyside 345kV)
Estimated Interconnection Costs: \$10,000,000



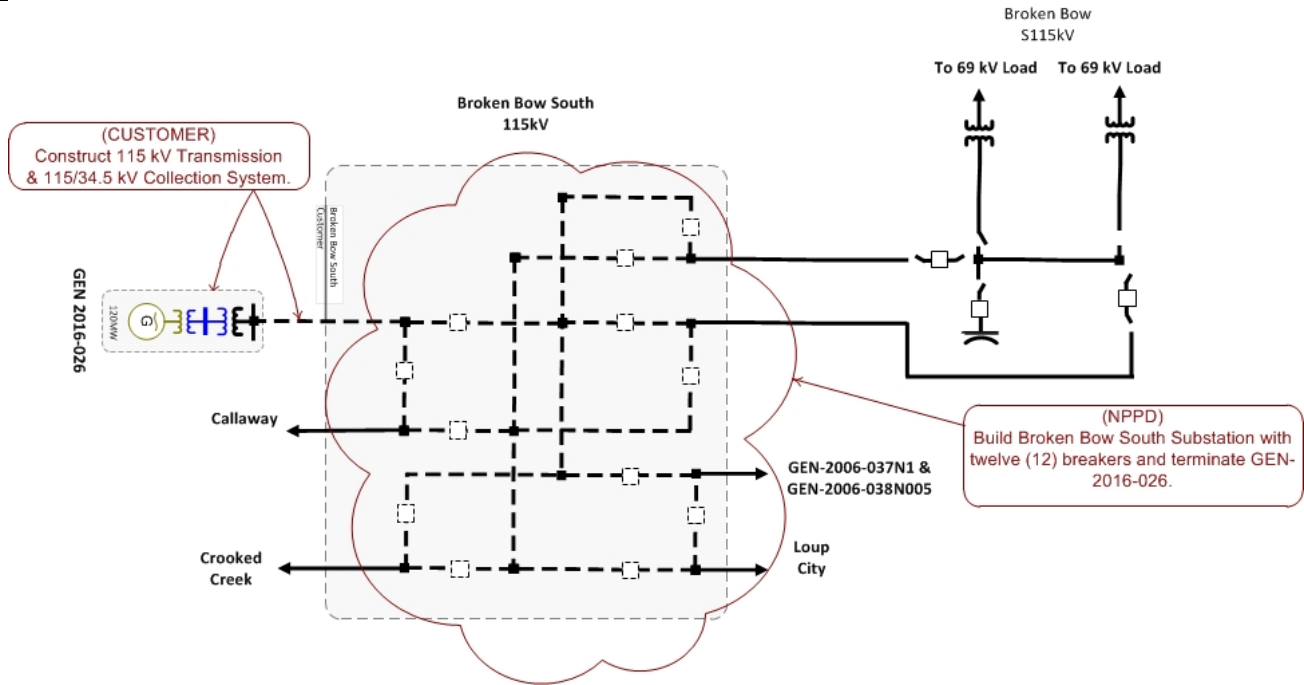
GEN-2016-019 (Tap Hugo – Sunnyside 345kV)
Estimated Interconnection Costs: \$10,000,000



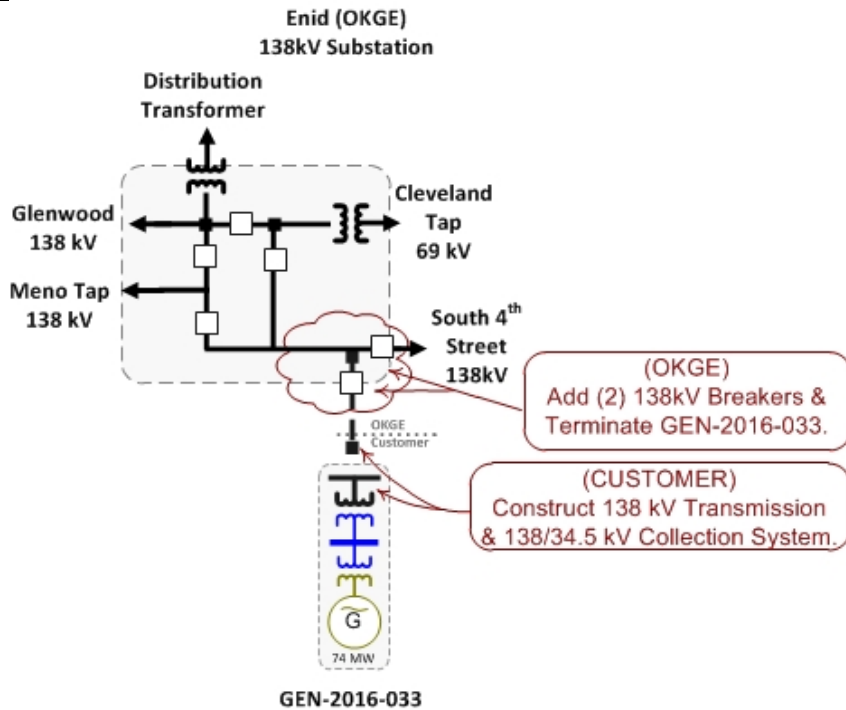
GEN-2016-026 (Callaway 115kV)
Estimated Interconnection Costs: \$3,000,000



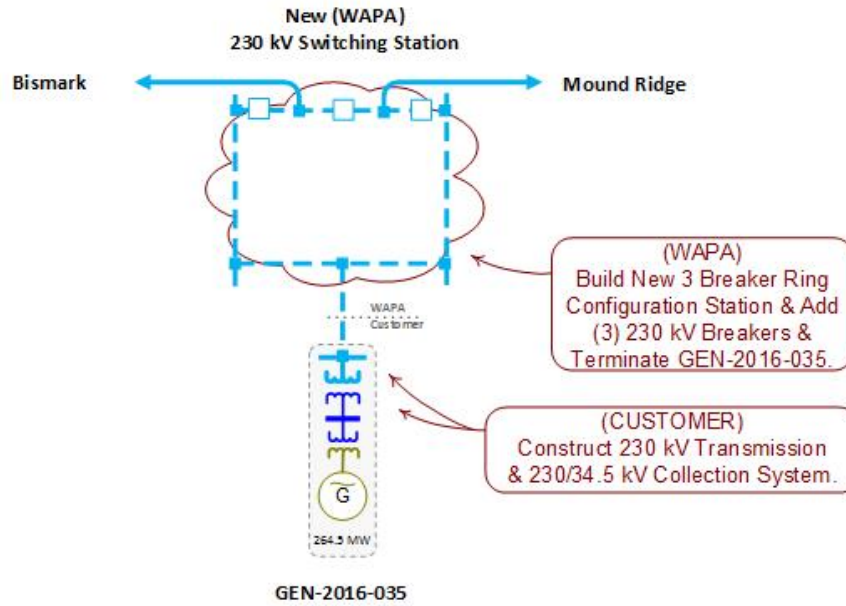
GEN-2016-026 (Broken Bow 115kV)
Estimated Interconnection Costs: \$15,000,000



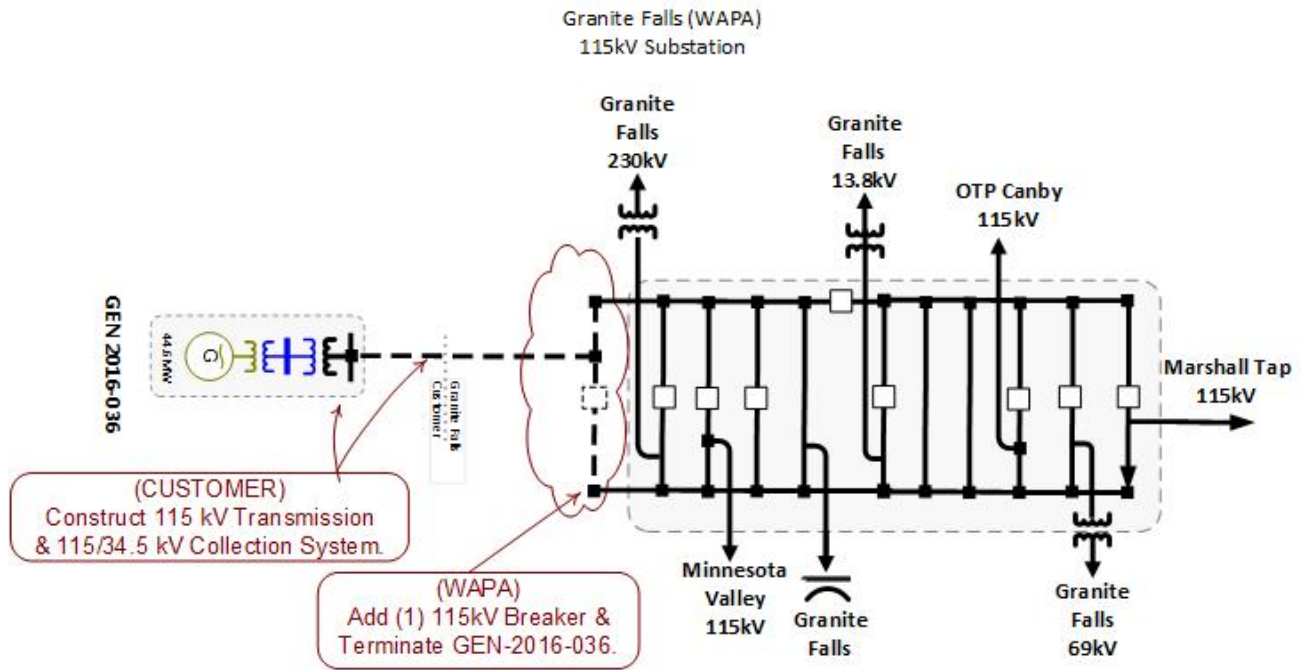
GEN-2016-033 (IMO 138kV)
Estimated Interconnection Costs: \$3,000,000



GEN-2016-035 (Tap Bismark – Mound City 230kV)
Estimated Interconnection Costs: \$6,000,000



GEN-2016-036 (Granite Falls 115kV)
Estimated Interconnection Costs: \$3,000,000



10.5 E: Cost Allocation per Interconnection Request (Including Prior Queued Upgrades)

Important Note:

****WITHDRAWAL OF HIGHER QUEUED PROJECTS WILL CAUSE A RESTUDY AND MAY RESULT IN HIGHER INTERCONNECTION COSTS****

This section shows each Generator Interconnection Request Customer, their current study impacted Network Upgrades, and the previously allocated upgrades upon which they rely to accommodate their interconnection to the transmission system.

The costs associated with the current study Network Upgrades are allocated to the Customers shown in this report.

In addition should a higher queued request, defined as one this study includes as a prior queued request, withdraw, the Network Upgrades assigned to the withdrawn request may be reallocated to the remaining requests that have an impact on the Network Upgrade under a restudy. Also, should an Interconnection Request choose to go into service prior to the operation date of any necessary Network Upgrades, the costs associated with those upgrades may be reallocated to the impacted Interconnection Request. The actual costs allocated to each Generator Interconnection Request Customer will be determined at the time of a restudy.

The required interconnection costs listed do not include all costs associated with the deliverability of the energy to final customers. These costs are determined by separate studies if the Customer submits a Transmission Service Request through SPP's Open Access Same Time Information System (OASIS) as required by Attachment Z1 of the SPP OATT. In addition, costs associated with a short circuit analysis will be allocated should the Interconnection Request Customer choose to execute a Interconnection Facilities Study Agreement.

Appendix E. Cost Allocation Per Request

(Including Previously Allocated Network Upgrades*)

Interconnection Request and Upgrades	Upgrade Type	Allocated Cost	Upgrade Cost
GEN-2016-006			
GEN-2016-006 Interconnection Costs See One-Line Diagram.	Current Study	\$6,000,000	\$6,000,000
Mission - Witten 115kV CKT 2 NRIS Only required upgrade: build approximately 28 miles of second circuit 115kV	Current Study	\$21,000,000	\$21,000,000
Scotts Bluff - Victory Hill 115kV CKT 1 NRIS Only required upgrade: rebuild or reconductor 8 miles of 115kV	Current Study	\$6,000,000	\$6,000,000
Gentleman - Thedford 345kV CKT 1 Build approximately 76 Miles of 345kV from Gentleman to Thedford per SPP-NTC-200220 (Total Project E&C Cost Shown).	Previously Allocated		\$311,717,040
Thedford - Holt County 345kV CKT 1 Build approximately 146 Miles of 345kV from Thedford to Holt County per SPP-NTC-200220 (Total Project E&C Cost Shown).	Previously Allocated		\$311,717,040
	Current Study Total	\$33,000,000	
GEN-2016-010 @ Harper			
GEN-2016-010 @ Harper Interconnection Costs See One-Line Diagram.	Current Study	\$4,000,000	\$4,000,000
Harper - Milan Tap 138kV CKT 1 Rebuild approximately 22 miles of 138kV line	Current Study	\$13,401,835	\$13,401,835
Milan Tap - Clearwater 138kV CKT 1 Rebuild approximately 5.7 miles (MKEC) and 6.1 miles (WERE) of 138kV transmission	Current Study	\$12,459,248	\$12,459,248
Clearwater - Viola 138kV CKT 1 SPP 2013 ITP NT assigneg upgrade per SPP-NTC-200288 for 6/1/2019 in-service.	Previously Allocated		\$37,815,044
Viola - Sumner County 138kV CKT 1 SPP 2014 ITP NT assigned upgrade per SPP-NTC-200296 for 6/1/2019 in-service.	Previously Allocated		\$51,513,963
Viola 345/138 kV Transformer CKT 1 SPP 2013 ITP NT assigned upgrade per SPP-NTC-200288 for 6/1/2019 in-service.	Previously Allocated		\$19,339,327
	Current Study Total	\$29,861,083	
GEN-2016-010 @ Viola			
GEN-2016-010 @ Viola Interconnection Costs See One-Line Diagram.	Current Study	\$50,000	\$50,000

* Withdrawal of higher queued projects will cause a restudy and may result in higher costs

Interconnection Request and Upgrades	Upgrade Type	Allocated Cost	Upgrade Cost
DISIS-2015-002-1 Network Upgrade(s) DISIS-2015-002-1 Network Upgrades	Previously Allocated		\$TBD
DISIS-2016-001 Network Upgrade(s) Potential DISIS-2016-001 Network Upgrades	Previously Allocated		\$TBD
Northwest 138kV Circuit Breaker Replace Northwest 138kV Circuit Breaker for short circuit requirements	Previously Allocated		\$750,000
	Current Study Total	\$50,000	
GEN-2016-018			
GEN-2016-018 Interconnection Costs See One-Line Diagram.	Current Study	\$10,000,000	\$10,000,000
	Current Study Total	\$10,000,000	
GEN-2016-019			
Brown - Tupelo 138kV CKT 1 NRIS Only required upgrade: replace terminal equipment to achieve conductor limit	Current Study	\$400,000	\$400,000
GEN-2016-019 Interconnection Costs See One-Line Diagram.	Current Study	\$10,000,000	\$10,000,000
Hugo - GEN-2016-063 Tap 345kV CKT 1 Replace terminal equipment to at least 2190 amps	Current Study	\$250,000	\$250,000
Sunnyside - GEN-2016-063 Tap 345kV CKT 1 Replace terminal equipment to at least 2190 amps	Current Study	\$250,000	\$250,000
	Current Study Total	\$10,900,000	
GEN-2016-026 @ Broken Bow			
Callaway - Stapleton 115kV CKT 1 Build approximately 43 miles of new 115kV from Callaway to Broken Bow	Current Study	\$34,000,000	\$34,000,000
GEN-2016-026 @ Broken Bow Interconnection Costs See One-Line Diagram.	Current Study	\$15,000,000	\$15,000,000
Albion - Petersburg - North Petersburg 115kV CKT 1 Reconductor 115kV lines and replace all terminal equipment for at least a 193MVA rate.	Previously Allocated		\$3,500,000
Battle Creek-County Line 115kV CKT 1 Rebuild approximately 11 miles of 115kV from Battle Creek to County Line.	Previously Allocated		\$4,000,000
Broken Bow - Ord 115kV CKT 1 Build a new 35 mile 115kV line from Broken Bow Wind - Ord per SPP-NTC-200294	Previously Allocated		\$32,618,819

* Withdrawal of higher queued projects will cause a restudy and may result in higher costs

Interconnection Request and Upgrades	Upgrade Type	Allocated Cost	Upgrade Cost
Broken Bow - Ord 115kV CKT 1 Build a new 35 mile 115kV line from Broken Bow Wind - Ord per SPP-NTC-200294	Previously Allocated		\$32,618,819
County Line-Neligh East 115kV CKT 1 Rebuild approximately 12 miles of 115kV from County Line to Neligh East.	Previously Allocated		\$8,050,000
DISIS-2015-002-1 Network Upgrade(s) DISIS-2015-002-1 Network Upgrades	Previously Allocated		\$TBD
Hoskins - Dixon County - Twin Church 230kV Rerate per NPPD Facility Study	Previously Allocated		\$500,000
Hoskins - Neligh 345/115kV Projects Per SPP 2014 ITP NT and NTC 200253 for 6/1/2016 in-service.	Previously Allocated		\$98,697,720
Ord - North Loup City 115kV CKT 1 Replace terminal equipment per SPP-NTC-200294	Previously Allocated		\$362,040
Ord - North Loup City 115kV CKT 1 Replace terminal equipment per SPP-NTC-200294	Previously Allocated		\$362,040
Twin Church - Dixon County 230kV Increase conductor clearances to accommodate 320MVA facility rating	Previously Allocated		\$100,000
	Current Study Total	\$49,000,000	

GEN-2016-026 @ Callaway

Callaway - Stapleton 115kV CKT 1 Build approximately 43 miles of new 115kV from Callaway to Broken Bow	Current Study	\$34,000,000	\$34,000,000
GEN-2016-026 @ Callaway Interconnection Costs See One-Line Diagram.	Current Study	\$3,000,000	\$3,000,000
Albion - Petersburg - North Petersburg 115kV CKT 1 Reconductor 115kV lines and replace all terminal equipment for at least a 193MVA rate.	Previously Allocated		\$3,500,000
Battle Creek-County Line 115kV CKT 1 Rebuild approximately 11 miles of 115kV from Battle Creek to County Line.	Previously Allocated		\$4,000,000
Broken Bow - Ord 115kV CKT 1 Build a new 35 mile 115kV line from Broken Bow Wind - Ord per SPP-NTC-200294	Previously Allocated		\$32,618,819
Broken Bow - Ord 115kV CKT 1 Build a new 35 mile 115kV line from Broken Bow Wind - Ord per SPP-NTC-200294	Previously Allocated		\$32,618,819
County Line-Neligh East 115kV CKT 1 Rebuild approximately 12 miles of 115kV from County Line to Neligh East.	Previously Allocated		\$8,050,000

* Withdrawal of higher queued projects will cause a restudy and may result in higher costs

Interconnection Request and Upgrades	Upgrade Type	Allocated Cost	Upgrade Cost
DISIS-2015-002-1 Network Upgrade(s) DISIS-2015-002-1 Network Upgrades	Previously Allocated		\$TBD
Hoskins - Dixon County - Twin Church 230kV Rerate per NPPD Facility Study	Previously Allocated		\$500,000
Hoskins - Neligh 345/115kV Projects Per SPP 2014 ITP NT and NTC 200253 for 6/1/2016 in-service.	Previously Allocated		\$98,697,720
Ord - North Loup City 115kV CKT 1 Replace terminal equipment per SPP-NTC-200294	Previously Allocated		\$362,040
Ord - North Loup City 115kV CKT 1 Replace terminal equipment per SPP-NTC-200294	Previously Allocated		\$362,040
Twin Church - Dixon County 230kV Increase conductor clearances to accommodate 320MVA facility rating	Previously Allocated		\$100,000
	Current Study Total	\$37,000,000	

GEN-2016-033

GEN-2016-033 Interconnection Costs See One-Line Diagram.	Current Study	\$3,000,000	\$3,000,000
DISIS-2015-002-1 Network Upgrade(s) DISIS-2015-002-1 Network Upgrades	Previously Allocated		\$TBD
DISIS-2016-001 Network Upgrade(s) Potential DISIS-2016-001 Network Upgrades	Previously Allocated		\$TBD
Northwest 138kV Circuit Breaker Replace Northwest 138kV Circuit Breaker for short circuit requirements	Previously Allocated		\$750,000
	Current Study Total	\$3,000,000	

GEN-2016-035

GEN-2016-035 Interconnection Costs See One-Line Diagram.	Current Study	\$6,000,000	\$6,000,000
GEN-2016-035 Tap - Morton County 230kV Build approximately 20 miles of new 230kV from Gen-2016-035 Tap to a new substation (Morton Co)	Current Study	\$17,000,000	\$17,000,000
Morton County 345/230kV Substation Build new 345/230kV substation and install 345/230/13kV transformer at the new substation (Morton Co)	Current Study	\$20,000,000	\$20,000,000
AVS - Charlie Creek 345kV CKT 1 Build new 345kV line from Antelope Valley Station - Charlie Creek.	Previously Allocated		\$96,000,000

* Withdrawal of higher queued projects will cause a restudy and may result in higher costs

Interconnection Request and Upgrades	Upgrade Type	Allocated Cost	Upgrade Cost
AVS 345kV Substation Construct new 345kV Antelope Valley Switching Station to accommodate new 345kV line from Charlie Creek.	Previously Allocated		\$3,000,000
Charlie Creek - Judson 345kV CKT 1 Build new 345kV line from Charlie Creek - Judson.	Previously Allocated		\$103,000,000
Charlie Creek 345kV Substation Expand Charlie Creek 345kV Substation to accommodate new 345kV line from AVS.	Previously Allocated		\$9,000,000
DISIS-2015-002-1 Network Upgrade(s) DISIS-2015-002-1 Network Upgrades	Previously Allocated		\$TBD
Judson - Tande 345kV CKT 1 Build new 345kV line from Judson - Tande.	Previously Allocated		\$86,000,000
Judson - Williston 230kV CKT 1 Build new 230kV line from Judson Substation to Williston.	Previously Allocated		\$2,400,000
Judson 345/230kV Substation Construct new 345kV Judson Substation adjacent to the existing 230kV Williston Substation and install new 345/230/13.8kV Transformer at Judson.	Previously Allocated		\$19,000,000
Neset - Tande 230kV CKT 1 Build new 230kV line from Neset - Tande.	Previously Allocated		\$3,000,000
Neset 230kV Terminal Upgrades Install necessary terminal upgrades at Neset 230kV to accommodate new 230kV line from new Tande substation.	Previously Allocated		\$4,000,000
Tande 345/230 Substation Construct new 345kV Tande Substation adjacent to the existing 230kV Neset Substation and install new 345/230/13.8kV Transformer at Tande.	Previously Allocated		\$18,000,000
Williston 230kV Terminal Upgrades Install necessary terminal upgrades at Williston 230kV to accommodate new 230kV line from new Judson substation.	Previously Allocated		\$2,000,000
	Current Study Total		\$43,000,000
GEN-2016-036			
GEN-2016-036 Interconnection Costs See One-Line Diagram.	Current Study	\$3,000,000	\$3,000,000
DISIS-2015-002-1 Network Upgrade(s) DISIS-2015-002-1 Network Upgrades	Previously Allocated		\$TBD
	Current Study Total		\$3,000,000
TOTAL CURRENT STUDY COSTS:			\$218,811,083

* Withdrawal of higher queued projects will cause a restudy and may result in higher costs

10.6 F: Cost Allocation per Proposed Study Network Upgrade

Important Note:

****WITHDRAWAL OF HIGHER QUEUED PROJECTS WILL CAUSE A RESTUDY AND MAY RESULT IN HIGHER INTERCONNECTION COSTS****

This section shows each Direct Assigned Facility and Network Upgrade and the Generator Interconnection Request Customer(s) which have an impact in this study assuming all higher queued projects remain in the queue and achieve commercial operation.

The required interconnection costs listed do not include all costs associated with the deliverability of the energy to final customers. These costs are determined by separate studies if the Customer submits a Transmission Service Request through SPP's Open Access Same Time Information System (OASIS) as required by Attachment Z1 of the SPP OATT. In addition, costs associated with a short circuit analysis will be allocated should the Interconnection Request Customer choose to execute a Facility Study Agreement.

There may be additional costs allocated to each Customer. See Appendix E for more details.

Appendix F. Cost Allocation by Upgrade

Brown - Tupelo 138kV CKT 1		\$400,000
NRIS Only required upgrade: replace terminal equipment to achieve conductor limit		
	GEN-2016-019	\$400,000
	Total Allocated Costs	\$400,000
Callaway - Stapleton 115kV CKT 1		\$34,000,000
Build approximately 43 miles of new 115kV from Callaway to Broken Bow		
	GEN-2016-026 @ Callaway	\$34,000,000
	Total Allocated Costs	\$34,000,000
Callaway - Stapleton 115kV CKT 1		\$34,000,000
Build approximately 43 miles of new 115kV from Callaway to Broken Bow		
	GEN-2016-026 @ Broken Bow	\$34,000,000
	Total Allocated Costs	\$34,000,000
GEN-2016-006 Interconnection Costs		\$6,000,000
See One-Line Diagram.		
	GEN-2016-006	\$6,000,000
	Total Allocated Costs	\$6,000,000
GEN-2016-010 @ Harper Interconnection Costs		\$4,000,000
See One-Line Diagram.		
	GEN-2016-010 @ Harper	\$4,000,000
	Total Allocated Costs	\$4,000,000
GEN-2016-010 @ Viola Interconnection Costs		\$50,000
See One-Line Diagram.		
	GEN-2016-010 @ Viola	\$50,000
	Total Allocated Costs	\$50,000
GEN-2016-018 Interconnection Costs		\$10,000,000
See One-Line Diagram.		
	GEN-2016-018	\$10,000,000
	Total Allocated Costs	\$10,000,000

* Withdrawal of higher queued projects will cause a restudy and may result in higher costs

GEN-2016-019 Interconnection Costs		\$10,000,000
See One-Line Diagram.		
	GEN-2016-019	\$10,000,000
	Total Allocated Costs	\$10,000,000
GEN-2016-026 @ Broken Bow Interconnection Costs		\$15,000,000
See One-Line Diagram.		
	GEN-2016-026 @ Broken Bow	\$15,000,000
	Total Allocated Costs	\$15,000,000
GEN-2016-026 @ Callaway Interconnection Costs		\$3,000,000
See One-Line Diagram.		
	GEN-2016-026 @ Callaway	\$3,000,000
	Total Allocated Costs	\$3,000,000
GEN-2016-033 Interconnection Costs		\$3,000,000
See One-Line Diagram.		
	GEN-2016-033	\$3,000,000
	Total Allocated Costs	\$3,000,000
GEN-2016-035 Interconnection Costs		\$6,000,000
See One-Line Diagram.		
	GEN-2016-035	\$6,000,000
	Total Allocated Costs	\$6,000,000
GEN-2016-035 Tap - Morton County 230kV		\$17,000,000
Build approximately 20 miles of new 230kV from Gen-2016-035 Tap to a new substation (Morton Co)		
	GEN-2016-035	\$17,000,000
	Total Allocated Costs	\$17,000,000
GEN-2016-036 Interconnection Costs		\$3,000,000
See One-Line Diagram.		
	GEN-2016-036	\$3,000,000
	Total Allocated Costs	\$3,000,000
Harper - Milan Tap 138kV CKT 1		\$13,401,835
Rebuild approximately 22 miles of 138kV line		
	GEN-2016-010 @ Harper	\$13,401,835
	Total Allocated Costs	\$13,401,835

* Withdrawal of higher queued projects will cause a restudy and may result in higher costs

Hugo - GEN-2016-063 Tap 345kV CKT 1		\$250,000
Replace terminal equipment to at least 2190 amps		
	GEN-2016-019	\$250,000
	Total Allocated Costs	\$250,000
Milan Tap - Clearwater 138kV CKT 1		\$12,459,248
Rebuild approximately 5.7 miles (MKEC) and 6.1 miles (WERE) of 138kV transmission		
	GEN-2016-010 @ Harper	\$12,459,248
	Total Allocated Costs	\$12,459,248
Mission - Witten 115kV CKT 2		\$21,000,000
NRIS Only required upgrade: build approximately 28 miles of second circuit 115kV		
	GEN-2016-006	\$21,000,000
	Total Allocated Costs	\$21,000,000
Morton County 345/230kV Substation		\$20,000,000
Build new 345/230kV substation and install 345/230/13kV transformer at the new substation (Morton Co)		
	GEN-2016-035	\$20,000,000
	Total Allocated Costs	\$20,000,000
Scotts Bluff - Victory Hill 115kV CKT 1		\$6,000,000
NRIS Only required upgrade: rebuild or reconductor 8 miles of 115kV		
	GEN-2016-006	\$6,000,000
	Total Allocated Costs	\$6,000,000
Sunnyside - GEN-2016-063 Tap 345kV CKT 1		\$250,000
Replace terminal equipment to at least 2190 amps		
	GEN-2016-019	\$250,000
	Total Allocated Costs	\$250,000

* Withdrawal of higher queued projects will cause a restudy and may result in higher costs

10.7 G: FCITC Analysis Constraints Requiring Transmission Reinforcement

See next page.

Source Key

- G16_006 – GEN-2016-006
- G16_010A – GEN-2016-010 @ Viola
- G16_010B – GEN-2016-010 @ Harper
- G16_018 – GEN-2016-018
- G16_019 – GEN-2016-019
- G16_026A – GEN-2016-026 @ Callaway
- G16_026B – GEN-2016-026 @ Broken Bow
- G16_033 – GEN-2016-033
- G16_035 – GEN-2016-035
- G16_036 – GEN-2016-036

SEASON	GROUP	SCENARIO	DIRECTION	SOURCE	MONITORED ELEMENT	RATE (MVA)	TDF	CONTINGENCY LOADING %	CONTINGENCY
20WP	16ALL	0	TO->FROM	G16_035	BISMARCK - G16-035-TAP 230.00 230KV CKT 1	263.3	1	115.2028	GLENHAM - L3 HAWDON 230KV CKT 1
16WP	16ALL	0	TO->FROM	G16_035	BISMARCK - G16-035-TAP 230.00 230KV CKT 1	263.2	1	115.0946	GLENHAM - L3 HAWDON 230KV CKT 1
17G	16ALL	0	TO->FROM	G16_035	BISMARCK - G16-035-TAP 230.00 230KV CKT 1	263.2	1	114.5626	GLENHAM - L3 HAWDON 230KV CKT 1
20L	16ALL	0	TO->FROM	G16_035	BISMARCK - G16-035-TAP 230.00 230KV CKT 1	263.9	1	114.3725	GLENHAM - L3 HAWDON 230KV CKT 1
25SP	16ALL	0	TO->FROM	G16_035	BISMARCK - G16-035-TAP 230.00 230KV CKT 1	262.2	1	110.4992	GLENHAM - L3 HAWDON 230KV CKT 1
20SP	16ALL	0	TO->FROM	G16_035	BISMARCK - G16-035-TAP 230.00 230KV CKT 1	263.1	1	109.209	GLENHAM - L3 HAWDON 230KV CKT 1
17SP	16ALL	0	TO->FROM	G16_035	BISMARCK - G16-035-TAP 230.00 230KV CKT 1	262.7	1	109.0708	GLENHAM - L3 HAWDON 230KV CKT 1
20L	16ALL	0	TO->FROM	G16_035	BISMARCK - G16-035-TAP 230.00 230KV CKT 1	263.9	0.99933	103.0046	GLENHAM - WHITLOK 230KV CKT 1
20L	16ALL	0	TO->FROM	G16_035	BISMARCK - G16-035-TAP 230.00 230KV CKT 1	263.9	0.99933	103.0046	P12:230:UMZB# 114 #: SB IN SD. SB-WK-GH
20L	16ALL	0	TO->FROM	G16_035	BISMARCK - G16-035-TAP 230.00 230KV CKT 1	263.9	0.99933	103.0046	P12:230:UMZB# 117 #: WK IN SD. SB-WK-GH
25SP	16ALL	0	TO->FROM	G16_035	BISMARCK - G16-035-TAP 230.00 230KV CKT 1	262.2	1	102.7952	G16-035-TAP 230.00 - L3 HAWDON 230KV CKT 1
17SP	16ALL	0	TO->FROM	G16_035	BISMARCK - G16-035-TAP 230.00 230KV CKT 1	262.7	1	102.5614	G16-035-TAP 230.00 - L3 HAWDON 230KV CKT 1
16WP	16ALL	0	TO->FROM	G16_035	BISMARCK - G16-035-TAP 230.00 230KV CKT 1	263.2	1	102.5186	G16-035-TAP 230.00 - L3 HAWDON 230KV CKT 1
20WP	16ALL	0	TO->FROM	G16_035	BISMARCK - G16-035-TAP 230.00 230KV CKT 1	263.3	1	102.5176	G16-035-TAP 230.00 - L3 HAWDON 230KV CKT 1
20SP	16ALL	0	TO->FROM	G16_035	BISMARCK - G16-035-TAP 230.00 230KV CKT 1	263.1	1	102.4815	G16-035-TAP 230.00 - L3 HAWDON 230KV CKT 1
17G	16ALL	0	TO->FROM	G16_035	BISMARCK - G16-035-TAP 230.00 230KV CKT 1	263.2	1	102.4426	G16-035-TAP 230.00 - L3 HAWDON 230KV CKT 1
20L	16ALL	0	TO->FROM	G16_035	BISMARCK - G16-035-TAP 230.00 230KV CKT 1	263.9	1	102.1709	G16-035-TAP 230.00 - L3 HAWDON 230KV CKT 1
20L	16ALL	0	TO->FROM	G16_035	BISMARCK - G16-035-TAP 230.00 230KV CKT 1	263.9	0.99933	101.0342	SULLY BUTTE - SULLYBT-LNX3230.00 230KV CKT Z
20L	16ALL	0	TO->FROM	G16_035	BISMARCK - G16-035-TAP 230.00 230KV CKT 1	263.9	0.99933	101.0342	SULLYBT-LNX3230.00 - WHITLOK 230KV CKT 1
17G	16ALL	0	TO->FROM	G16_035	BISMARCK - G16-035-TAP 230.00 230KV CKT 1	263.2	0.99974	101.0278	GLENHAM - WHITLOK 230KV CKT 1
17G	16ALL	0	TO->FROM	G16_035	BISMARCK - G16-035-TAP 230.00 230KV CKT 1	263.2	0.99974	101.0278	P12:230:UMZB# 114 #: SB IN SD. SB-WK-GH
17G	16ALL	0	TO->FROM	G16_035	BISMARCK - G16-035-TAP 230.00 230KV CKT 1	263.2	0.99974	101.0278	P12:230:UMZB# 117 #: WK IN SD. SB-WK-GH
17SP	16ALL	0	FROM->TO	G16_035	BROADLAND - HURON 230KV CKT 1	382.8	0.07347	117.8824	System Intact
25SP	16ALL	0	FROM->TO	G16_035	BROADLAND - HURON 230KV CKT 1	385.6	0.07144	113.2028	System Intact
20SP	16ALL	0	FROM->TO	G16_035	BROADLAND - HURON 230KV CKT 1	386.8	0.07109	110.8575	System Intact
17G	16ALL	0	FROM->TO	G16_035	BROADLAND - HURON 230KV CKT 1	386.8	0.07094	109.5889	System Intact
16WP	16ALL	0	FROM->TO	G16_035	BROADLAND - HURON 230KV CKT 1	392.1	0.07228	101.2724	System Intact
17SP	16ALL	2	FROM->TO	G16_035	BROADLAND - HURON 230KV CKT 1	383	0.08026	117.846	System Intact
25SP	16ALL	2	FROM->TO	G16_035	BROADLAND - HURON 230KV CKT 1	385.7	0.07839	113.2266	System Intact
20SP	16ALL	2	FROM->TO	G16_035	BROADLAND - HURON 230KV CKT 1	386.9	0.07805	110.8583	System Intact
17G	16ALL	2	FROM->TO	G16_035	BROADLAND - HURON 230KV CKT 1	386.9	0.07772	109.7123	System Intact
16WP	16ALL	2	FROM->TO	G16_035	BROADLAND - HURON 230KV CKT 1	392.1	0.07907	101.4244	System Intact
20L	09ALL	0	TO->FROM	G16_026A	BROKEN BOW - CALLAWAY 115KV CKT 1	136.8	1	111.2937	CALLAWAY - MAXWELL 115KV CKT 1
17G	09ALL	0	TO->FROM	G16_026A	BROKEN BOW - CALLAWAY 115KV CKT 1	136.8	1	111.0744	CALLAWAY - MAXWELL 115KV CKT 1
16WP	09ALL	0	TO->FROM	G16_026A	BROKEN BOW - CALLAWAY 115KV CKT 1	137	1	108.6494	CALLAWAY - MAXWELL 115KV CKT 1
20WP	09ALL	0	TO->FROM	G16_026A	BROKEN BOW - CALLAWAY 115KV CKT 1	137	1	108.5035	CALLAWAY - MAXWELL 115KV CKT 1
17G	09ALL_1	2	TO->FROM	G16_026A	BROKEN BOW - CALLAWAY 115KV CKT 1	136.9	1	111.0663	CALLAWAY - MAXWELL 115KV CKT 1
16WP	09ALL_1	2	TO->FROM	G16_026A	BROKEN BOW - CALLAWAY 115KV CKT 1	137	1	108.7225	CALLAWAY - MAXWELL 115KV CKT 1
17G	09ALL	0	FROM->TO	G16_026B	BROKEN BOW - CROOKED CREEK 115KV CKT 1	159.8	0.56412	109.4671	BROKEN BOW - LOUP CITY 115KV CKT 1
16WP	09ALL	0	FROM->TO	G16_026B	BROKEN BOW - CROOKED CREEK 115KV CKT 1	159.9	0.56401	105.6622	BROKEN BOW - LOUP CITY 115KV CKT 1
16WP	09ALL	0	FROM->TO	G16_026A	BROKEN BOW - LOUP CITY 115KV CKT 1	118.1	0.3766	127.1541	BROKEN BOW - CROOKED CREEK 115KV CKT 1
16WP	09ALL	0	FROM->TO	G16_026A	BROKEN BOW - LOUP CITY 115KV CKT 1	118.1	0.3766	126.8155	CROOKED CREEK (CR.CREEK T1) 230/115/13.8KV TRANSFORMER CKT 1
16WP	09ALL	0	FROM->TO	G16_026A	BROKEN BOW - LOUP CITY 115KV CKT 1	118.1	0.3766	126.8155	P13:115-230:NPPD:C.CREEK4:T1
17G	09ALL	0	FROM->TO	G16_026A	BROKEN BOW - LOUP CITY 115KV CKT 1	118.7	0.37679	121.7948	BROKEN BOW - CROOKED CREEK 115KV CKT 1
17G	09ALL	0	FROM->TO	G16_026A	BROKEN BOW - LOUP CITY 115KV CKT 1	118.7	0.37679	121.205	CROOKED CREEK (CR.CREEK T1) 230/115/13.8KV TRANSFORMER CKT 1
17G	09ALL	0	FROM->TO	G16_026A	BROKEN BOW - LOUP CITY 115KV CKT 1	118.7	0.37679	121.205	P13:115-230:NPPD:C.CREEK4:T1
16WP	09ALL	0	FROM->TO	G16_026A	BROKEN BOW - LOUP CITY 115KV CKT 1	118.1	0.43656	119.6235	CALLAWAY - MAXWELL 115KV CKT 1
17G	09ALL	0	FROM->TO	G16_026A	BROKEN BOW - LOUP CITY 115KV CKT 1	118.7	0.43665	113.2552	CALLAWAY - MAXWELL 115KV CKT 1
17SP	09ALL	0	FROM->TO	G16_026A	BROKEN BOW - LOUP CITY 115KV CKT 1	119	0.37641	108.1948	BROKEN BOW - CROOKED CREEK 115KV CKT 1
17SP	09ALL	0	FROM->TO	G16_026A	BROKEN BOW - LOUP CITY 115KV CKT 1	119	0.37641	108.1948	CROOKED CREEK (CR.CREEK T1) 230/115/13.8KV TRANSFORMER CKT 1
17SP	09ALL	0	FROM->TO	G16_026A	BROKEN BOW - LOUP CITY 115KV CKT 1	119	0.37641	108.1948	P13:115-230:NPPD:C.CREEK4:T1
16WP	09ALL	0	FROM->TO	G16_026A	BROKEN BOW - LOUP CITY 115KV CKT 1	118.1	0.24444	105.071	P12:345:SUNC-NPPD:MINGO-REDWILLOW::531451-640325(1)
16WP	09ALL	0	FROM->TO	G16_026A	BROKEN BOW - LOUP CITY 115KV CKT 1	118.1	0.35281	104.4971	MAXWELL - NORTH PLATTE 115KV CKT 1
17SP	09ALL	0	FROM->TO	G16_026A	BROKEN BOW - LOUP CITY 115KV CKT 1	119	0.43637	103.1581	CALLAWAY - MAXWELL 115KV CKT 1
16WP	09ALL	0	FROM->TO	G16_026A	BROKEN BOW - LOUP CITY 115KV CKT 1	118.1	0.23175	102.4416	PETERSBRG.N7115.00 - PETERSBURG 115KV CKT Z1

SEASON	GROUP	SCENARIO	DIRECTION	SOURCE	MONITORED ELEMENT	RATE		CONTINGENCY		CONTINGENCY
						(MVA)	TDF	LOADING %		
16WP	09ALL	0	FROM->TO	G16_026A	BROKEN BOW - LOUP CITY 115KV CKT 1	118.1	0.25156	102.2076		CROOKED CREEK - RIVERDALE 230KV CKT 1
16WP	09ALL	0	FROM->TO	G16_026A	BROKEN BOW - LOUP CITY 115KV CKT 1	118.1	0.23175	101.9336		ALBION - PETERSBURG 115KV CKT 1
16WP	09ALL	0	FROM->TO	G16_026A	BROKEN BOW - LOUP CITY 115KV CKT 1	118.1	0.23175	101.9336		P12:115:NPPD:1168B:ALBION 7:PETERSBRG.N7:BTB
17G	09ALL	0	FROM->TO	G16_026A	BROKEN BOW - LOUP CITY 115KV CKT 1	118.7	0.35297	100.9813		MAXWELL - NORTH PLATTE 115KV CKT 1
16WP	09ALL	0	FROM->TO	G16_026A	BROKEN BOW - LOUP CITY 115KV CKT 1	118.1	0.24546	100.6252		AINSWORTH - AINSWORTH 115KV CKT 1
16WP	09ALL	0	FROM->TO	G16_026B	BROKEN BOW - LOUP CITY 115KV CKT 1	118.1	0.49858	143.4707		BROKEN BOW - CROOKED CREEK 115KV CKT 1
16WP	09ALL	0	FROM->TO	G16_026B	BROKEN BOW - LOUP CITY 115KV CKT 1	118.1	0.49858	143.132		CROOKED CREEK (CR.CREEK T1) 230/115/13.8KV TRANSFORMER CKT 1
16WP	09ALL	0	FROM->TO	G16_026B	BROKEN BOW - LOUP CITY 115KV CKT 1	118.1	0.49858	143.132		P13:115-230:NPPD:C.CREEK4:T1
17G	09ALL	0	FROM->TO	G16_026B	BROKEN BOW - LOUP CITY 115KV CKT 1	118.7	0.49878	138.0289		BROKEN BOW - CROOKED CREEK 115KV CKT 1
17G	09ALL	0	FROM->TO	G16_026B	BROKEN BOW - LOUP CITY 115KV CKT 1	118.7	0.49878	137.4391		CROOKED CREEK (CR.CREEK T1) 230/115/13.8KV TRANSFORMER CKT 1
17G	09ALL	0	FROM->TO	G16_026B	BROKEN BOW - LOUP CITY 115KV CKT 1	118.7	0.49878	137.4391		P13:115-230:NPPD:C.CREEK4:T1
17SP	09ALL	0	FROM->TO	G16_026B	BROKEN BOW - LOUP CITY 115KV CKT 1	119	0.49839	124.388		BROKEN BOW - CROOKED CREEK 115KV CKT 1
17SP	09ALL	0	FROM->TO	G16_026B	BROKEN BOW - LOUP CITY 115KV CKT 1	119	0.49839	124.388		CROOKED CREEK (CR.CREEK T1) 230/115/13.8KV TRANSFORMER CKT 1
17SP	09ALL	0	FROM->TO	G16_026B	BROKEN BOW - LOUP CITY 115KV CKT 1	119	0.49839	124.388		P13:115-230:NPPD:C.CREEK4:T1
16WP	09ALL	0	FROM->TO	G16_026B	BROKEN BOW - LOUP CITY 115KV CKT 1	118.1	0.43656	122.8411		BROKEN BOW - CALLAWAY 115KV CKT 1
16WP	09ALL	0	FROM->TO	G16_026B	BROKEN BOW - LOUP CITY 115KV CKT 1	118.1	0.43656	119.6235		CALLAWAY - MAXWELL 115KV CKT 1
17SP	09ALL	0	FROM->TO	G16_026B	BROKEN BOW - LOUP CITY 115KV CKT 1	119	0.43637	117.864		BROKEN BOW - CALLAWAY 115KV CKT 1
17G	09ALL	0	FROM->TO	G16_026B	BROKEN BOW - LOUP CITY 115KV CKT 1	118.7	0.43665	115.3614		BROKEN BOW - CALLAWAY 115KV CKT 1
16WP	09ALL	0	FROM->TO	G16_026B	BROKEN BOW - LOUP CITY 115KV CKT 1	118.1	0.31662	114.7267		P12:345:SUNC-NPPD:MINGO-REDWILLOW::531451-640325(1)
17G	09ALL	0	FROM->TO	G16_026B	BROKEN BOW - LOUP CITY 115KV CKT 1	118.7	0.43665	113.2552		CALLAWAY - MAXWELL 115KV CKT 1
16WP	09ALL	0	FROM->TO	G16_026B	BROKEN BOW - LOUP CITY 115KV CKT 1	118.1	0.32538	112.0781		CROOKED CREEK - RIVERDALE 230KV CKT 1
16WP	09ALL	0	FROM->TO	G16_026B	BROKEN BOW - LOUP CITY 115KV CKT 1	118.1	0.30234	111.8824		PETERSBRG.N7115.00 - PETERSBURG 115KV CKT Z1
16WP	09ALL	0	FROM->TO	G16_026B	BROKEN BOW - LOUP CITY 115KV CKT 1	118.1	0.30234	111.3744		ALBION - PETERSBURG 115KV CKT 1
16WP	09ALL	0	FROM->TO	G16_026B	BROKEN BOW - LOUP CITY 115KV CKT 1	118.1	0.30234	111.3744		P12:115:NPPD:1168B:ALBION 7:PETERSBRG.N7:BTB
16WP	09ALL	0	FROM->TO	G16_026B	BROKEN BOW - LOUP CITY 115KV CKT 1	118.1	0.31599	110.066		AINSWORTH - AINSWORTH 115KV CKT 1
16WP	09ALL	0	FROM->TO	G16_026B	BROKEN BOW - LOUP CITY 115KV CKT 1	118.1	0.31419	109.4048		P12:345:SUNC:MINGO-SETAB::531451-531465(1)
16WP	09ALL	0	FROM->TO	G16_026B	BROKEN BOW - LOUP CITY 115KV CKT 1	118.1	0.31252	109.2589		G15088_T 345.00 - MOORE 345KV CKT 1
17SP	09ALL	0	FROM->TO	G16_026B	BROKEN BOW - LOUP CITY 115KV CKT 1	119	0.31642	108.7052		P12:345:SUNC-NPPD:MINGO-REDWILLOW::531451-640325(1)
16WP	09ALL	0	FROM->TO	G16_026B	BROKEN BOW - LOUP CITY 115KV CKT 1	118.1	0.38258	108.4856		MAXWELL - NORTH PLATTE 115KV CKT 1
17SP	09ALL	0	FROM->TO	G16_026B	BROKEN BOW - LOUP CITY 115KV CKT 1	119	0.30214	108.4035		PETERSBRG.N7115.00 - PETERSBURG 115KV CKT Z1
16WP	09ALL	0	FROM->TO	G16_026B	BROKEN BOW - LOUP CITY 115KV CKT 1	118.1	0.31245	108.279		GRAND ISLAND - SWEETWATER 345KV CKT 1
16WP	09ALL	0	FROM->TO	G16_026B	BROKEN BOW - LOUP CITY 115KV CKT 1	118.1	0.31299	108.1069		GERALD GENTLEMAN STATION - SWEETWATER 345KV CKT 1
17SP	09ALL	0	FROM->TO	G16_026B	BROKEN BOW - LOUP CITY 115KV CKT 1	119	0.30214	107.311		ALBION - PETERSBURG 115KV CKT 1
17SP	09ALL	0	FROM->TO	G16_026B	BROKEN BOW - LOUP CITY 115KV CKT 1	119	0.30214	107.311		P12:115:NPPD:1168B:ALBION 7:PETERSBRG.N7:BTB
16WP	09ALL	0	FROM->TO	G16_026B	BROKEN BOW - LOUP CITY 115KV CKT 1	118.1	0.31125	106.7271		KELLY - S1399 5 161KV CKT 1
16WP	09ALL	0	FROM->TO	G16_026B	BROKEN BOW - LOUP CITY 115KV CKT 1	118.1	0.31254	106.6757		GERALD GENTLEMAN STATION - SWEETWATER 345KV CKT 2
16WP	09ALL	0	FROM->TO	G16_026B	BROKEN BOW - LOUP CITY 115KV CKT 1	118.1	0.31125	106.6424		PETERSBRG.N7115.00 115/34.5KV TRANSFORMER CKT 1
16WP	09ALL	0	FROM->TO	G16_026B	BROKEN BOW - LOUP CITY 115KV CKT 1	118.1	0.31315	106.4635		P12:345:SUNC:SETAB-HOLCOMB::531449-531465(1)
17G	09ALL	0	FROM->TO	G16_026B	BROKEN BOW - LOUP CITY 115KV CKT 1	118.7	0.31704	105.1173		P12:345:SUNC-NPPD:MINGO-REDWILLOW::531451-640325(1)
17G	09ALL	0	FROM->TO	G16_026B	BROKEN BOW - LOUP CITY 115KV CKT 1	118.7	0.38274	104.9496		MAXWELL - NORTH PLATTE 115KV CKT 1
17SP	09ALL	0	FROM->TO	G16_026B	BROKEN BOW - LOUP CITY 115KV CKT 1	119	0.31099	104.4676		CALLAWAY (CALLAWAY T1) 115/69/13.8KV TRANSFORMER CKT 1
17SP	09ALL	0	FROM->TO	G16_026B	BROKEN BOW - LOUP CITY 115KV CKT 1	119	0.31099	104.4676		P14:069:NPPD:CALAWAY8:CAP
17SP	09ALL	0	FROM->TO	G16_026B	BROKEN BOW - LOUP CITY 115KV CKT 1	119	0.32507	103.9266		CROOKED CREEK - RIVERDALE 230KV CKT 1
17SP	09ALL	0	FROM->TO	G16_026B	BROKEN BOW - LOUP CITY 115KV CKT 1	119	0.31566	103.5704		AINSWORTH - AINSWORTH 115KV CKT 1
17SP	09ALL	0	FROM->TO	G16_026B	BROKEN BOW - LOUP CITY 115KV CKT 1	119	0.43637	103.1581		CALLAWAY - MAXWELL 115KV CKT 1
20WP	09ALL	0	FROM->TO	G16_026B	BROKEN BOW - LOUP CITY 115KV CKT 1	119.6	0.30719	102.7788		BROKENBOW.N7115.00 - ORD 115KV CKT 1
17SP	09ALL	0	FROM->TO	G16_026B	BROKEN BOW - LOUP CITY 115KV CKT 1	119	0.31396	102.5432		P12:345:SUNC:MINGO-SETAB::531451-531465(1)
16WP	09ALL	0	FROM->TO	G16_026B	BROKEN BOW - LOUP CITY 115KV CKT 1	118.1	0.31125	102.4087		System Intact
17SP	09ALL	0	FROM->TO	G16_026B	BROKEN BOW - LOUP CITY 115KV CKT 1	119	0.31224	101.7435		G15088_T 345.00 - MOORE 345KV CKT 1
17SP	09ALL	0	FROM->TO	G16_026B	BROKEN BOW - LOUP CITY 115KV CKT 1	119	0.3127	101.5953		GERALD GENTLEMAN STATION - SWEETWATER 345KV CKT 1
17G	09ALL	0	FROM->TO	G16_026B	BROKEN BOW - LOUP CITY 115KV CKT 1	118.7	0.30255	100.9825		PETERSBRG.N7115.00 - PETERSBURG 115KV CKT Z1
17SP	09ALL	0	FROM->TO	G16_026B	BROKEN BOW - LOUP CITY 115KV CKT 1	119	0.2609	100.8048		ALBION - SPALDING 115KV CKT 1
17SP	09ALL	0	FROM->TO	G16_026B	BROKEN BOW - LOUP CITY 115KV CKT 1	119	0.31208	100.6511		GRAND ISLAND - SWEETWATER 345KV CKT 1
17G	09ALL	0	FROM->TO	G16_026B	BROKEN BOW - LOUP CITY 115KV CKT 1	118.7	0.30255	100.6455		ALBION - PETERSBURG 115KV CKT 1
17G	09ALL	0	FROM->TO	G16_026B	BROKEN BOW - LOUP CITY 115KV CKT 1	118.7	0.30255	100.6455		P12:115:NPPD:1168B:ALBION 7:PETERSBRG.N7:BTB

SEASON	GROUP	SCENARIO	DIRECTION	SOURCE	MONITORED ELEMENT	RATE		CONTINGENCY		CONTINGENCY
						(MVA)	TDF	LOADING %		
17SP	09ALL	0	FROM->TO	G16_026B	BROKEN BOW - LOUP CITY 115KV CKT 1	119	0.3121	100.453		GERALD GENTLEMAN STATION - RED WILLOW 345KV CKT 1
17SP	09ALL	0	FROM->TO	G16_026B	BROKEN BOW - LOUP CITY 115KV CKT 1	119	0.31099	100.1819		GERALD GENTLEMAN STATION - RED WILLOW 345KV CKT 1
17G	09ALL	0	FROM->TO	G16_026B	BROKEN BOW - LOUP CITY 115KV CKT 1	118.7	0.32564	100.1622		CROOKED CREEK - RIVERDALE 230KV CKT 1
16WP	09ALL_2	2	FROM->TO	G16_026B	BROKEN BOW - LOUP CITY 115KV CKT 1	118.6	0.31125	102.0613		BROKENBOW.N7115.00 - ORD 115KV CKT 1
20L	09ALL	0	FROM->TO	G16_026A	CALLAWAY - MAXWELL 115KV CKT 1	139.7	1	108.9834		BROKEN BOW - CALLAWAY 115KV CKT 1
17G	09ALL	0	FROM->TO	G16_026A	CALLAWAY - MAXWELL 115KV CKT 1	139.8	1	108.6908		BROKEN BOW - CALLAWAY 115KV CKT 1
16WP	09ALL	0	FROM->TO	G16_026A	CALLAWAY - MAXWELL 115KV CKT 1	139.9	1	106.3972		BROKEN BOW - CALLAWAY 115KV CKT 1
20WP	09ALL	0	FROM->TO	G16_026A	CALLAWAY - MAXWELL 115KV CKT 1	140	1	106.1784		BROKEN BOW - CALLAWAY 115KV CKT 1
17G	09ALL_1	2	FROM->TO	G16_026A	CALLAWAY - MAXWELL 115KV CKT 1	139.9	1	108.6846		BROKEN BOW - CALLAWAY 115KV CKT 1
16WP	09ALL_1	2	FROM->TO	G16_026A	CALLAWAY - MAXWELL 115KV CKT 1	140	1	106.3927		BROKEN BOW - CALLAWAY 115KV CKT 1
25SP	00NR_1	2	FROM->TO	G16_018	CLAYTON - SARDIS 138KV CKT 1	97.9	0.03756	242.841		G16-063-TAP 345.00 - SUNNYSIDE 345KV CKT 1
20SP	00NR_1	2	FROM->TO	G16_018	CLAYTON - SARDIS 138KV CKT 1	97.9	0.03759	240.2245		G16-063-TAP 345.00 - SUNNYSIDE 345KV CKT 1
17SP	00NR_1	2	FROM->TO	G16_018	CLAYTON - SARDIS 138KV CKT 1	98	0.03763	228.666		G16-063-TAP 345.00 - SUNNYSIDE 345KV CKT 1
25SP	00NR_2	2	FROM->TO	G16_019	CLAYTON - SARDIS 138KV CKT 1	97.9	0.03756	230.7751		G16-063-TAP 345.00 - SUNNYSIDE 345KV CKT 1
20SP	00NR_2	2	FROM->TO	G16_019	CLAYTON - SARDIS 138KV CKT 1	97.9	0.03759	228.1567		G16-063-TAP 345.00 - SUNNYSIDE 345KV CKT 1
17SP	00NR_2	2	FROM->TO	G16_019	CLAYTON - SARDIS 138KV CKT 1	98	0.03763	216.6098		G16-063-TAP 345.00 - SUNNYSIDE 345KV CKT 1
17G	03ALL	0	FROM->TO	G16_010B	CLEARWATER - GILL ENERGY CENTER WEST 138KV CKT 1	136.2	0.37751	141.6493		G1524G1525 345.00 - THISTLE7 345.00 345KV CKT 1
17G	03ALL	0	FROM->TO	G16_010B	CLEARWATER - GILL ENERGY CENTER WEST 138KV CKT 1	136.2	0.37751	141.6493		G1524G1525 345.00 - THISTLE7 345.00 345KV CKT 2
16WP	03ALL	0	FROM->TO	G16_010B	CLEARWATER - GILL ENERGY CENTER WEST 138KV CKT 1	139	0.65386	141.0748		P12:138:ITCGRP:FLATRIDGE-THISTLE::
16WP	03ALL	0	FROM->TO	G16_010B	CLEARWATER - GILL ENERGY CENTER WEST 138KV CKT 1	139	0.65386	141.0748		THISTLE7 345.00 (THISTLE T1) 345/138/13.8KV TRANSFORMER CKT 1
17SP	03ALL	0	FROM->TO	G16_010B	CLEARWATER - GILL ENERGY CENTER WEST 138KV CKT 1	137.9	0.4051	138.7563		G1524G1525 345.00 - THISTLE7 345.00 345KV CKT 1
17SP	03ALL	0	FROM->TO	G16_010B	CLEARWATER - GILL ENERGY CENTER WEST 138KV CKT 1	137.9	0.4051	138.7563		G1524G1525 345.00 - THISTLE7 345.00 345KV CKT 2
17G	03ALL	0	FROM->TO	G16_010B	CLEARWATER - GILL ENERGY CENTER WEST 138KV CKT 1	136.2	0.37493	137.5043		MATHWSN7 345.00 - TATONGA7 345.00 345KV CKT 1
16WP	03ALL	0	FROM->TO	G16_010B	CLEARWATER - GILL ENERGY CENTER WEST 138KV CKT 1	139	0.37742	136.2869		G1524G1525 345.00 - THISTLE7 345.00 345KV CKT 1
16WP	03ALL	0	FROM->TO	G16_010B	CLEARWATER - GILL ENERGY CENTER WEST 138KV CKT 1	139	0.37742	136.2869		G1524G1525 345.00 - THISTLE7 345.00 345KV CKT 2
17SP	03ALL	0	FROM->TO	G16_010B	CLEARWATER - GILL ENERGY CENTER WEST 138KV CKT 1	137.9	0.40258	135.0591		MATHWSN7 345.00 - TATONGA7 345.00 345KV CKT 1
17SP	03ALL	0	FROM->TO	G16_010B	CLEARWATER - GILL ENERGY CENTER WEST 138KV CKT 1	137.9	0.40224	134.9286		BENTON - WICHITA 345KV CKT 1
17G	03ALL	0	FROM->TO	G16_010B	CLEARWATER - GILL ENERGY CENTER WEST 138KV CKT 1	136.2	0.37482	133.8246		BENTON - WICHITA 345KV CKT 1
17G	03ALL	0	FROM->TO	G16_010B	CLEARWATER - GILL ENERGY CENTER WEST 138KV CKT 1	136.2	0.37493	133.5396		G11_051T 345.00 - TATONGA7 345.00 345KV CKT 1
16WP	03ALL	0	FROM->TO	G16_010B	CLEARWATER - GILL ENERGY CENTER WEST 138KV CKT 1	139	0.37479	132.9748		MATHWSN7 345.00 - TATONGA7 345.00 345KV CKT 1
17G	03ALL	0	FROM->TO	G16_010B	CLEARWATER - GILL ENERGY CENTER WEST 138KV CKT 1	136.2	0.37347	132.6482		G13-010T 345.00 - POST ROCK 345KV CKT 1
17G	03ALL	0	FROM->TO	G16_010B	CLEARWATER - GILL ENERGY CENTER WEST 138KV CKT 1	136.2	0.37493	132.4382		G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
17SP	03ALL	0	FROM->TO	G16_010B	CLEARWATER - GILL ENERGY CENTER WEST 138KV CKT 1	137.9	0.39415	131.8009		45TH ST4 138.00 - EVANS ENERGY CENTER SOUTH 138KV CKT 1
17SP	03ALL	0	FROM->TO	G16_010B	CLEARWATER - GILL ENERGY CENTER WEST 138KV CKT 1	137.9	0.4012	131.5995		G13-010T 345.00 - POST ROCK 345KV CKT 1
17SP	03ALL	0	FROM->TO	G16_010B	CLEARWATER - GILL ENERGY CENTER WEST 138KV CKT 1	137.9	0.39415	131.5108		45TH ST4 138.00 - COWSKIN 138KV CKT 1
17SP	03ALL	0	FROM->TO	G16_010B	CLEARWATER - GILL ENERGY CENTER WEST 138KV CKT 1	137.9	0.39415	131.4383		P12:138:WERE:COWS-GECT_138::
17SP	03ALL	0	FROM->TO	G16_010B	CLEARWATER - GILL ENERGY CENTER WEST 138KV CKT 1	137.9	0.40258	131.3608		G11_051T 345.00 - TATONGA7 345.00 345KV CKT 1
17G	03ALL	0	FROM->TO	G16_010B	CLEARWATER - GILL ENERGY CENTER WEST 138KV CKT 1	136.2	0.37347	131.2532		G13-010T 345.00 - G16-049-TAP 345.00 345KV CKT 1
17G	03ALL	0	FROM->TO	G16_010B	CLEARWATER - GILL ENERGY CENTER WEST 138KV CKT 1	136.2	0.37233	130.3308		G13-010T 345.00 - POST ROCK 345KV CKT 1
17SP	03ALL	0	FROM->TO	G16_010B	CLEARWATER - GILL ENERGY CENTER WEST 138KV CKT 1	137.9	0.40258	130.128		G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
17SP	03ALL	0	FROM->TO	G16_010B	CLEARWATER - GILL ENERGY CENTER WEST 138KV CKT 1	137.9	0.4012	130.0767		G13-010T 345.00 - G16-049-TAP 345.00 345KV CKT 1
17SP	03ALL	0	FROM->TO	G16_010B	CLEARWATER - GILL ENERGY CENTER WEST 138KV CKT 1	137.9	0.39631	129.8955		EVANS ENERGY CENTER SOUTH - LAKERIDGE 138KV CKT 1
17G	03ALL	0	FROM->TO	G16_010B	CLEARWATER - GILL ENERGY CENTER WEST 138KV CKT 1	136.2	0.3738	129.6506		G1524G1525 345.00 - WICHITA 345KV CKT 1
17G	03ALL	0	FROM->TO	G16_010B	CLEARWATER - GILL ENERGY CENTER WEST 138KV CKT 1	136.2	0.3738	129.6506		G1524G1525 345.00 - WICHITA 345KV CKT 2
16WP	03ALL	0	FROM->TO	G16_010B	CLEARWATER - GILL ENERGY CENTER WEST 138KV CKT 1	139	0.37479	129.5215		G11_051T 345.00 - TATONGA7 345.00 345KV CKT 1
17G	03ALL	0	FROM->TO	G16_010B	CLEARWATER - GILL ENERGY CENTER WEST 138KV CKT 1	136.2	0.36742	129.4343		45TH ST4 138.00 - EVANS ENERGY CENTER SOUTH 138KV CKT 1
17G	03ALL	0	FROM->TO	G16_010B	CLEARWATER - GILL ENERGY CENTER WEST 138KV CKT 1	136.2	0.36742	129.2874		45TH ST4 138.00 - COWSKIN 138KV CKT 1
17G	03ALL	0	FROM->TO	G16_010B	CLEARWATER - GILL ENERGY CENTER WEST 138KV CKT 1	136.2	0.36742	129.214		P12:138:WERE:COWS-GECT_138::
17SP	03ALL	0	FROM->TO	G16_010B	CLEARWATER - GILL ENERGY CENTER WEST 138KV CKT 1	137.9	0.39328	129.026		P13:069-138:WERE:COWS_TX-1::
16WP	03ALL	0	FROM->TO	G16_010B	CLEARWATER - GILL ENERGY CENTER WEST 138KV CKT 1	139	0.37469	128.6637		BENTON - WICHITA 345KV CKT 1
17G	03ALL	0	FROM->TO	G16_010B	CLEARWATER - GILL ENERGY CENTER WEST 138KV CKT 1	136.2	0.37022	128.6239		WICHITA (WICH TX-12) 345/138/13.8KV TRANSFORMER CKT 1
16WP	03ALL	0	FROM->TO	G16_010B	CLEARWATER - GILL ENERGY CENTER WEST 138KV CKT 1	139	0.37479	128.4424		G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
17SP	03ALL	0	FROM->TO	G16_010B	CLEARWATER - GILL ENERGY CENTER WEST 138KV CKT 1	137.9	0.39631	128.3726		HOOVER NORTH - LAKERIDGE 138KV CKT 1
16WP	03ALL	0	FROM->TO	G16_010B	CLEARWATER - GILL ENERGY CENTER WEST 138KV CKT 1	139	0.37347	128.2496		G13-010T 345.00 - POST ROCK 345KV CKT 1
17G	03ALL	0	FROM->TO	G16_010B	CLEARWATER - GILL ENERGY CENTER WEST 138KV CKT 1	136.2	0.36929	127.917		EVANS ENERGY CENTER SOUTH - LAKERIDGE 138KV CKT 1

SEASON	GROUP	SCENARIO	DIRECTION	SOURCE	MONITORED ELEMENT	RATE		CONTINGENCY		CONTINGENCY
						(MVA)	TDF	LOADING %		
17SP	03ALL	0	FROM->TO	G16_010B	CLEARWATER - GILL ENERGY CENTER WEST 138KV CKT 1	137.9	0.39631	127.72	P12:138:WERE:GECT-HOOV_138::	
17G	03ALL	0	FROM->TO	G16_010B	CLEARWATER - GILL ENERGY CENTER WEST 138KV CKT 1	136.2	0.36666	127.667	P13:069-138:WERE:COWS_TX-1::	
17SP	03ALL	0	FROM->TO	G16_010B	CLEARWATER - GILL ENERGY CENTER WEST 138KV CKT 1	137.9	0.40138	127.6365	G1524G1525 345.00 - WICHITA 345KV CKT 1	
17SP	03ALL	0	FROM->TO	G16_010B	CLEARWATER - GILL ENERGY CENTER WEST 138KV CKT 1	137.9	0.40138	127.6365	G1524G1525 345.00 - WICHITA 345KV CKT 2	
16WP	03ALL	0	FROM->TO	G16_010B	CLEARWATER - GILL ENERGY CENTER WEST 138KV CKT 1	139	0.37347	126.9546	G13-010T 345.00 - G16-049-TAP 345.00 345KV CKT 1	
16WP	03ALL	0	FROM->TO	G16_010B	CLEARWATER - GILL ENERGY CENTER WEST 138KV CKT 1	139	0.37223	126.0527	G13-010T 345.00 - POST ROCK 345KV CKT 1	
16WP	03ALL	0	FROM->TO	G16_010B	CLEARWATER - GILL ENERGY CENTER WEST 138KV CKT 1	139	0.3737	124.9546	G1524G1525 345.00 - WICHITA 345KV CKT 1	
16WP	03ALL	0	FROM->TO	G16_010B	CLEARWATER - GILL ENERGY CENTER WEST 138KV CKT 1	139	0.3737	124.9546	G1524G1525 345.00 - WICHITA 345KV CKT 2	
16WP	03ALL	0	FROM->TO	G16_010B	CLEARWATER - GILL ENERGY CENTER WEST 138KV CKT 1	139	0.3673	124.153	45TH ST4 138.00 - EVANS ENERGY CENTER SOUTH 138KV CKT 1	
16WP	03ALL	0	FROM->TO	G16_010B	CLEARWATER - GILL ENERGY CENTER WEST 138KV CKT 1	139	0.3673	123.9372	45TH ST4 138.00 - COWSKIN 138KV CKT 1	
16WP	03ALL	0	FROM->TO	G16_010B	CLEARWATER - GILL ENERGY CENTER WEST 138KV CKT 1	139	0.3673	123.8653	P12:138:WERE:COWS-GECT_138::	
16WP	03ALL	0	FROM->TO	G16_010B	CLEARWATER - GILL ENERGY CENTER WEST 138KV CKT 1	139	0.37011	123.366	WICHITA (WICH TX-12) 345/138/13.8KV TRANSFORMER CKT 1	
17G	03ALL	0	FROM->TO	G16_010B	CLEARWATER - GILL ENERGY CENTER WEST 138KV CKT 1	136.2	0.37233	120.6392	System Intact	
17SP	03ALL	0	FROM->TO	G16_010B	CLEARWATER - GILL ENERGY CENTER WEST 138KV CKT 1	137.9	0.39992	118.579	System Intact	
16WP	03ALL	0	FROM->TO	G16_010B	CLEARWATER - GILL ENERGY CENTER WEST 138KV CKT 1	139	0.37223	116.3405	System Intact	
20L	03ALL	0	TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	104.3	0.70103	211.9795	P12:138:ITCGP:FLATRIDGE-THISTLE::	
20L	03ALL	0	TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	104.3	0.70103	211.9795	THISTLE7 345.00 (THISTLE T1) 345/138/13.8KV TRANSFORMER CKT 1	
17G	03ALL	0	TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	95.9	0.37751	209.0995	G1524G1525 345.00 - THISTLE7 345.00 345KV CKT 1	
17G	03ALL	0	TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	95.9	0.37751	209.0995	G1524G1525 345.00 - THISTLE7 345.00 345KV CKT 2	
17SP	03ALL	0	TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	99.3	0.4051	203.5699	G1524G1525 345.00 - THISTLE7 345.00 345KV CKT 1	
17SP	03ALL	0	TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	99.3	0.4051	203.5699	G1524G1525 345.00 - THISTLE7 345.00 345KV CKT 2	
17G	03ALL	0	TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	95.9	0.37493	203.2126	MATHWSN7 345.00 - TATONGA7 345.00 345KV CKT 1	
17SP	03ALL	0	TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	99.3	0.40258	198.4355	MATHWSN7 345.00 - TATONGA7 345.00 345KV CKT 1	
17SP	03ALL	0	TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	99.3	0.40224	198.355	BENTON - WICHITA 345KV CKT 1	
17G	03ALL	0	TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	95.9	0.37482	197.9865	BENTON - WICHITA 345KV CKT 1	
17G	03ALL	0	TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	95.9	0.37493	197.5818	G11_051T 345.00 - TATONGA7 345.00 345KV CKT 1	
17G	03ALL	0	TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	95.9	0.37347	196.4201	G13-010T 345.00 - POST ROCK 345KV CKT 1	
17G	03ALL	0	TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	95.9	0.37493	196.0176	G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1	
20WP	03ALL	0	TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	101.2	0.43024	195.2635	G1524G1525 345.00 - THISTLE7 345.00 345KV CKT 1	
20WP	03ALL	0	TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	101.2	0.43024	195.2635	G1524G1525 345.00 - THISTLE7 345.00 345KV CKT 2	
16WP	03ALL	0	TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	100.8	0.37742	194.3838	G1524G1525 345.00 - THISTLE7 345.00 345KV CKT 1	
16WP	03ALL	0	TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	100.8	0.37742	194.3838	G1524G1525 345.00 - THISTLE7 345.00 345KV CKT 2	
17SP	03ALL	0	TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	99.3	0.39415	194.0115	45TH ST4 138.00 - EVANS ENERGY CENTER SOUTH 138KV CKT 1	
17SP	03ALL	0	TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	99.3	0.4012	193.6311	G13-010T 345.00 - POST ROCK 345KV CKT 1	
17SP	03ALL	0	TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	99.3	0.39415	193.508	45TH ST4 138.00 - COWSKIN 138KV CKT 1	
17SP	03ALL	0	TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	99.3	0.39415	193.4073	P12:138:WERE:COWS-GECT_138::	
17SP	03ALL	0	TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	99.3	0.40258	193.2996	G11_051T 345.00 - TATONGA7 345.00 345KV CKT 1	
17G	03ALL	0	TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	95.9	0.37233	193.0246	BENTON - WICHITA 345KV CKT 1	
17G	03ALL	0	TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	95.9	0.3738	192.0585	G1524G1525 345.00 - WICHITA 345KV CKT 1	
17G	03ALL	0	TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	95.9	0.3738	192.0585	G1524G1525 345.00 - WICHITA 345KV CKT 2	
17G	03ALL	0	TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	95.9	0.36742	191.7513	45TH ST4 138.00 - EVANS ENERGY CENTER SOUTH 138KV CKT 1	
17SP	03ALL	0	TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	99.3	0.40258	191.6883	G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1	
17G	03ALL	0	TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	95.9	0.36742	191.5427	45TH ST4 138.00 - COWSKIN 138KV CKT 1	
17G	03ALL	0	TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	95.9	0.36742	191.4384	P12:138:WERE:COWS-GECT_138::	
17SP	03ALL	0	TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	99.3	0.39631	191.2647	EVANS ENERGY CENTER SOUTH - LAKERIDGE 138KV CKT 1	
17G	03ALL	0	TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	95.9	0.37022	190.6003	WICHITA (WICH TX-12) 345/138/13.8KV TRANSFORMER CKT 1	
17SP	03ALL	0	TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	99.3	0.39328	190.0573	P13:069-138:WERE:COWS_TX-1::	
16WP	03ALL	0	TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	100.8	0.37479	189.8164	MATHWSN7 345.00 - TATONGA7 345.00 345KV CKT 1	
17G	03ALL	0	TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	95.9	0.36929	189.7007	EVANS ENERGY CENTER SOUTH - LAKERIDGE 138KV CKT 1	
17G	03ALL	0	TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	95.9	0.36666	189.3456	P13:069-138:WERE:COWS_TX-1::	
17SP	03ALL	0	TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	99.3	0.39631	189.1499	HOOVER NORTH - LAKERIDGE 138KV CKT 1	
17SP	03ALL	0	TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	99.3	0.39631	188.2435	P12:138:WERE:GECT-HOOV_138::	
17G	03ALL	0	TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	95.9	0.37347	188.1918	G16-049-TAP 345.00 - SPEARVILLE 345KV CKT 1	
17SP	03ALL	0	TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	99.3	0.40138	188.1277	G1524G1525 345.00 - WICHITA 345KV CKT 1	
17SP	03ALL	0	TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	99.3	0.39992	187.1303	G16-049-TAP 345.00 - SPEARVILLE 345KV CKT 1	

SEASON	GROUP	SCENARIO	DIRECTION	SOURCE	MONITORED ELEMENT	RATE		CONTINGENCY		CONTINGENCY
						(MVA)	TDF	LOADING %		
17SP	03ALL	0	TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	99.3	0.39577	187.0476	P13:069-138:WERE:HOOV_TX-3::	
17SP	03ALL	0	TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	99.3	0.4012	185.1527	G16-049-TAP 345.00 - SPEARVILLE 345KV CKT 1	
20WP	03ALL	0	TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	101.2	0.42709	185.1508	G13-010T 345.00 - POST ROCK 345KV CKT 1	
16WP	03ALL	0	TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	100.8	0.37479	185.0545	G11_051T 345.00 - TATONGA7 345.00 345KV CKT 1	
16WP	03ALL	0	TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	100.8	0.37469	183.8716	BENTON - WICHITA 345KV CKT 1	
16WP	03ALL	0	TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	100.8	0.37479	183.5664	G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1	
20SP	03ALL	0	TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	94.4	0.43102	183.3322	G1524G1525 345.00 - THISTLE7 345.00 345KV CKT 1	
20SP	03ALL	0	TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	94.4	0.43102	183.3322	G1524G1525 345.00 - THISTLE7 345.00 345KV CKT 2	
16WP	03ALL	0	TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	100.8	0.37347	183.3005	G13-010T 345.00 - POST ROCK 345KV CKT 1	
20WP	03ALL	0	TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	101.2	0.42709	183.1745	G13-010T 345.00 - G16-049-TAP 345.00 345KV CKT 1	
20L	03ALL	0	TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	104.3	0.42848	182.3436	G1524G1525 345.00 - THISTLE7 345.00 345KV CKT 1	
20L	03ALL	0	TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	104.3	0.42848	182.3436	G1524G1525 345.00 - THISTLE7 345.00 345KV CKT 2	
20WP	03ALL	0	TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	101.2	0.42503	182.0335	VIOLA 7 345.00 - WICHITA 345KV CKT 1	
16WP	03ALL	0	TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	100.8	0.37347	181.4156	G13-010T 345.00 - G16-049-TAP 345.00 345KV CKT 1	
16WP	03ALL	0	TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	100.8	0.37223	180.1719	G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1	
20WP	03ALL	0	TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	101.2	0.42713	179.9893	G1524G1525 345.00 - WICHITA 345KV CKT 1	
20WP	03ALL	0	TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	101.2	0.42713	179.9893	G1524G1525 345.00 - WICHITA 345KV CKT 2	
20WP	03ALL	0	TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	101.2	0.41057	179.9118	VIOLA 7 345.00 (VIOLA 1X) 345/138/13.8KV TRANSFORMER CKT 1	
17G	03ALL	0	TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	95.9	0.37233	179.2602	System Intact	
20WP	03ALL	0	TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	101.2	0.42589	178.9862	VIOLA 7 345.00 - WICHITA 345KV CKT 1	
16WP	03ALL	0	TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	100.8	0.3737	178.7568	G1524G1525 345.00 - WICHITA 345KV CKT 1	
16WP	03ALL	0	TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	100.8	0.3737	178.7568	G1524G1525 345.00 - WICHITA 345KV CKT 2	
20WP	03ALL	0	TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	101.2	0.42783	178.4762	BENTON - WICHITA 345KV CKT 1	
16WP	03ALL	0	TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	100.8	0.3673	177.5523	45TH ST4 138.00 - EVANS ENERGY CENTER SOUTH 138KV CKT 1	
16WP	03ALL	0	TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	100.8	0.3673	177.3539	45TH ST4 138.00 - COWSKIN 138KV CKT 1	
16WP	03ALL	0	TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	100.8	0.3673	177.2547	P12:138:WERE:COWS-GECT_138::	
20WP	03ALL	0	TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	101.2	0.42709	176.9084	G16-049-TAP 345.00 - SPEARVILLE 345KV CKT 1	
16WP	03ALL	0	TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	100.8	0.37011	176.5661	WICHITA (WICH TX-12) 345/138/13.8KV TRANSFORMER CKT 1	
16WP	03ALL	0	TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	100.8	0.37223	176.3028	WOLF CREEK 345/25.0KV TRANSFORMER CKT 1	
20WP	03ALL	0	TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	101.2	0.42663	175.7302	MATHWSN7 345.00 - TATONGA7 345.00 345KV CKT 2	
20WP	03ALL	0	TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	101.2	0.42589	175.7253	WOLF CREEK 345/25.0KV TRANSFORMER CKT 1	
17SP	03ALL	0	TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	99.3	0.39992	175.65	System Intact	
20WP	03ALL	0	TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	101.2	0.42663	175.6314	MATHWSN7 345.00 - TATONGA7 345.00 345KV CKT 1	
16WP	03ALL	0	TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	100.8	0.37347	175.5714	G16-049-TAP 345.00 - SPEARVILLE 345KV CKT 1	
16WP	03ALL	0	TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	100.8	0.36654	175.462	P13:069-138:WERE:COWS_TX-1::	
20SP	03ALL	0	TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	94.4	0.42773	174.7831	G13-010T 345.00 - POST ROCK 345KV CKT 1	
20L	03ALL	0	TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	104.3	0.42564	173.8847	G13-010T 345.00 - POST ROCK 345KV CKT 1	
20SP	03ALL	0	TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	94.4	0.42773	172.6645	G13-010T 345.00 - G16-049-TAP 345.00 345KV CKT 1	
20SP	03ALL	0	TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	94.4	0.42571	172.2241	VIOLA 7 345.00 - WICHITA 345KV CKT 1	
20L	03ALL	0	TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	104.3	0.42408	171.9018	VIOLA 7 345.00 - WICHITA 345KV CKT 1	
20L	03ALL	0	TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	104.3	0.42564	171.8712	G13-010T 345.00 - G16-049-TAP 345.00 345KV CKT 1	
20SP	03ALL	0	TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	94.4	0.41138	171.3547	VIOLA 7 345.00 (VIOLA 1X) 345/138/13.8KV TRANSFORMER CKT 1	
20SP	03ALL	0	TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	94.4	0.42847	169.7464	BENTON - WICHITA 345KV CKT 1	
20L	03ALL	0	TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	104.3	0.42572	169.2975	G1524G1525 345.00 - WICHITA 345KV CKT 1	
20L	03ALL	0	TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	104.3	0.42572	169.2975	G1524G1525 345.00 - WICHITA 345KV CKT 2	
20L	03ALL	0	TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	104.3	0.42462	169.2218	VIOLA 7 345.00 - WICHITA 345KV CKT 1	
20L	03ALL	0	TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	104.3	0.42643	168.884	BENTON - WICHITA 345KV CKT 1	
20SP	03ALL	0	TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	94.4	0.42782	168.8777	G1524G1525 345.00 - WICHITA 345KV CKT 1	
20SP	03ALL	0	TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	94.4	0.42782	168.8777	G1524G1525 345.00 - WICHITA 345KV CKT 2	
20WP	03ALL	0	TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	101.2	0.42589	167.6226	System Intact	
20L	03ALL	0	TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	104.3	0.42583	167.5966	G16-050-TAP 345.00 - POST ROCK 345KV CKT 1	
20SP	03ALL	0	TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	94.4	0.42448	167.0093	45TH ST4 138.00 - EVANS ENERGY CENTER SOUTH 138KV CKT 1	
16WP	03ALL	0	TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	100.8	0.37223	166.8782	System Intact	
20SP	03ALL	0	TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	94.4	0.42655	166.818	MILAN 4 (MILAN 4) 138/34.5/12.47KV TRANSFORMER CKT 1	
20SP	03ALL	0	TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	94.4	0.42448	166.6915	45TH ST4 138.00 - COWSKIN 138KV CKT 1	

SEASON	GROUP	SCENARIO	DIRECTION	SOURCE	MONITORED ELEMENT	RATE		CONTINGENCY		CONTINGENCY
						(MVA)	TDF	LOADING %		
20SP	03ALL	0	TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	94.4	0.42448	166.5856	P12:138:WERE:COWS-GECT_138::	
20SP	03ALL	0	TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	94.4	0.42773	165.9574	G16-049-TAP 345.00 - SPEARVILLE 345KV CKT 1	
20L	03ALL	0	TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	104.3	0.42564	165.8873	G16-049-TAP 345.00 - SPEARVILLE 345KV CKT 1	
20L	03ALL	0	TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	104.3	0.42462	165.5785	WOLF CREEK 345/25.0KV TRANSFORMER CKT 1	
25SP	03ALL	0	TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	103	0.70313	162.3669	P12:138:ITCGP:FLATRIDGE-THISTLE::	
25SP	03ALL	0	TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	103	0.70313	162.3669	THISTLE7 345.00 (THISTLE T1) 345/138/13.8KV TRANSFORMER CKT 1	
20L	03ALL	0	TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	104.3	0.42462	157.9083	System Intact	
20SP	03ALL	0	TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	94.4	0.42655	156.2248	System Intact	
25SP	03ALL	0	TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	103	0.43138	147.4817	G1524G1525 345.00 - THISTLE7 345.00 345KV CKT 1	
25SP	03ALL	0	TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	103	0.43138	147.4817	G1524G1525 345.00 - THISTLE7 345.00 345KV CKT 2	
25SP	03ALL	0	TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	103	0.42595	146.6146	VIOLA 7 345.00 - WICHITA 345KV CKT 1	
25SP	03ALL	0	TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	103	0.42802	145.2208	G13-010T 345.00 - POST ROCK 345KV CKT 1	
25SP	03ALL	0	TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	103	0.42802	143.2791	G13-010T 345.00 - G16-049-TAP 345.00 345KV CKT 1	
25SP	03ALL	0	TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	103	0.41166	141.7874	VIOLA 7 345.00 (VIOLA 1X) 345/138/13.8KV TRANSFORMER CKT 1	
25SP	03ALL	0	TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	103	0.42876	140.7894	BENTON - WICHITA 345KV CKT 1	
25SP	03ALL	0	TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	103	0.4297	140.5453	P12:345:OKGE-PRAIRIEWIND:WOODWARD-THISTLE::515375-539801(1)	
25SP	03ALL	0	TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	103	0.42474	140.3978	45TH ST4 138.00 - EVANS ENERGY CENTER SOUTH 138KV CKT 1	
25SP	03ALL	0	TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	103	0.42474	140.1066	45TH ST4 138.00 - COWSKIN 138KV CKT 1	
25SP	03ALL	0	TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	103	0.42474	140.0095	P12:138:WERE:COWS-GECT_138::	
25SP	03ALL	0	TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	103	0.42681	139.64	MILAN 4 (MILAN 4) 138/34.5/12.47KV TRANSFORMER CKT 1	
25SP	03ALL	0	TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	103	0.42681	129.7371	System Intact	
17G	03ALL	0	TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	95.9	0.37347	129.4704	P14:138:MKEC:HARPER:24:HARPER_4	
17G	03ALL	2	TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	95.7	0.40205	206.5933	G1524G1525 345.00 - THISTLE7 345.00 345KV CKT 1	
17G	03ALL	2	TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	95.7	0.40205	206.5933	G1524G1525 345.00 - THISTLE7 345.00 345KV CKT 2	
17G	03ALL	2	TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	95.7	0.39971	202.8524	MATHWSN7 345.00 - TATONGA7 345.00 345KV CKT 1	
17SP	03ALL	2	TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	100.4	0.43181	198.7915	G1524G1525 345.00 - THISTLE7 345.00 345KV CKT 1	
17SP	03ALL	2	TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	100.4	0.43181	198.7915	G1524G1525 345.00 - THISTLE7 345.00 345KV CKT 2	
17G	03ALL	2	TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	95.7	0.39971	196.3738	G11_051T 345.00 - TATONGA7 345.00 345KV CKT 1	
17SP	03ALL	2	TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	100.4	0.42956	195.552	MATHWSN7 345.00 - TATONGA7 345.00 345KV CKT 1	
16WP	03ALL	2	TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	99.8	0.4019	195.3545	G1524G1525 345.00 - THISTLE7 345.00 345KV CKT 1	
16WP	03ALL	2	TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	99.8	0.4019	195.3545	G1524G1525 345.00 - THISTLE7 345.00 345KV CKT 2	
17G	03ALL	2	TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	95.7	0.39971	194.5974	G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1	
17G	03ALL	2	TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	95.7	0.39806	192.9702	G13-010T 345.00 - POST ROCK 345KV CKT 1	
16WP	03ALL	2	TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	99.8	0.3995	192.9015	MATHWSN7 345.00 - TATONGA7 345.00 345KV CKT 1	
17G	03ALL	2	TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	95.7	0.39686	191.1807	VIOLA 7 345.00 - WICHITA 345KV CKT 1	
17G	03ALL	2	TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	95.7	0.39806	190.8803	G13-010T 345.00 - G16-049-TAP 345.00 345KV CKT 1	
17SP	03ALL	2	TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	100.4	0.42956	189.6755	G11_051T 345.00 - TATONGA7 345.00 345KV CKT 1	
17G	03ALL	2	TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	95.7	0.39836	188.7271	G1524G1525 345.00 - WICHITA 345KV CKT 1	
17G	03ALL	2	TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	95.7	0.39836	188.7271	G1524G1525 345.00 - WICHITA 345KV CKT 2	
17G	03ALL	2	TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	95.7	0.38361	188.6626	VIOLA 7 345.00 (VIOLA 1X) 345/138/13.8KV TRANSFORMER CKT 1	
17SP	03ALL	2	TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	100.4	0.42568	188.1368	VIOLA 7 345.00 - WICHITA 345KV CKT 1	
17SP	03ALL	2	TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	100.4	0.42802	188.0679	G13-010T 345.00 - POST ROCK 345KV CKT 1	
17SP	03ALL	2	TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	100.4	0.42956	187.8826	G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1	
17G	03ALL	2	TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	95.7	0.39913	187.4478	BENTON - WICHITA 345KV CKT 1	
16WP	03ALL	2	TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	99.8	0.3995	187.3904	G11_051T 345.00 - TATONGA7 345.00 345KV CKT 1	
17G	03ALL	2	TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	95.7	0.3969	186.1757	G16-049-TAP 345.00 - SPEARVILLE 345KV CKT 1	
17SP	03ALL	2	TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	100.4	0.42802	185.9763	G13-010T 345.00 - G16-049-TAP 345.00 345KV CKT 1	
16WP	03ALL	2	TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	99.8	0.3995	185.687	G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1	
17G	03ALL	2	TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	95.7	0.39806	184.5111	G16-049-TAP 345.00 - SPEARVILLE 345KV CKT 1	
17G	03ALL	2	TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	95.7	0.3969	184.1904	MILAN 4 - MILAN TAP 138KV CKT 1	
17G	03ALL	2	TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	95.7	0.3969	184.1904	MILAN 4 (MILAN 4) 138/34.5/12.47KV TRANSFORMER CKT 1	
17G	03ALL	2	TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	95.7	0.3969	184.1904	P12:138:MKEC:BLUFFCITY-MILANTAP::	
17SP	03ALL	2	TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	100.4	0.42888	183.9325	BENTON - WICHITA 345KV CKT 1	
16WP	03ALL	2	TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	99.8	0.39801	183.4908	G13-010T 345.00 - POST ROCK 345KV CKT 1	
17SP	03ALL	2	TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	100.4	0.42816	182.6468	G1524G1525 345.00 - WICHITA 345KV CKT 1	

SEASON	GROUP	SCENARIO	DIRECTION	SOURCE	MONITORED ELEMENT	RATE		CONTINGENCY		CONTINGENCY
						(MVA)	TDF	LOADING %		
17SP	03ALL	2	TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	100.4	0.42816	182.6468	G1524G1525 345.00 - WICHITA 345KV CKT 2	
16WP	03ALL	2	TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	99.8	0.39657	181.6313	VIOLA 7 345.00 - WICHITA 345KV CKT 1	
16WP	03ALL	2	TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	99.8	0.39801	181.4868	G13-010T 345.00 - G16-049-TAP 345.00 345KV CKT 1	
17SP	03ALL	2	TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	100.4	0.42455	180.2784	45TH ST4 138.00 - EVANS ENERGY CENTER SOUTH 138KV CKT 1	
17SP	03ALL	2	TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	100.4	0.42455	179.9796	45TH ST4 138.00 - COWSKIN 138KV CKT 1	
17SP	03ALL	2	TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	100.4	0.42455	179.88	P12:138:WERE:COWS-GECT_138::	
17SP	03ALL	2	TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	100.4	0.42802	179.3792	G16-049-TAP 345.00 - SPEARVILLE 345KV CKT 1	
17SP	03ALL	2	TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	100.4	0.42671	179.2921	MILAN 4 (MILAN 4) 138/34.5/12.47KV TRANSFORMER CKT 1	
17SP	03ALL	2	TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	100.4	0.40727	178.9765	VIOLA 7 345.00 (VIOLA 1X) 345/138/13.8KV TRANSFORMER CKT 1	
16WP	03ALL	2	TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	99.8	0.3982	178.914	G1524G1525 345.00 - WICHITA 345KV CKT 1	
16WP	03ALL	2	TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	99.8	0.3982	178.914	G1524G1525 345.00 - WICHITA 345KV CKT 2	
16WP	03ALL	2	TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	99.8	0.39894	177.4576	BENTON - WICHITA 345KV CKT 1	
16WP	03ALL	2	TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	99.8	0.38348	176.9776	VIOLA 7 345.00 (VIOLA 1X) 345/138/13.8KV TRANSFORMER CKT 1	
16WP	03ALL	2	TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	99.8	0.39674	176.8682	G16-049-TAP 345.00 - SPEARVILLE 345KV CKT 1	
16WP	03ALL	2	TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	99.8	0.39801	175.3792	G16-049-TAP 345.00 - SPEARVILLE 345KV CKT 1	
17G	03ALL	2	TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	95.7	0.3969	175.2039	System Intact	
16WP	03ALL	2	TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	99.8	0.39674	173.3612	WOLF CREEK 345/25.0KV TRANSFORMER CKT 1	
16WP	03ALL	2	TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	99.8	0.39674	173.261	MILAN 4 - MILAN TAP 138KV CKT 1	
16WP	03ALL	2	TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	99.8	0.39674	173.261	P12:138:MKEC:BLUFFCITY-MILANTAP::	
17SP	03ALL	2	TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	100.4	0.42671	169.6307	System Intact	
16WP	03ALL	2	TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	99.8	0.39674	166.247	System Intact	
17G	03ALL	3	TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	98.7	0.45024	233.8435	G1524G1525 345.00 - THISTLE7 345.00 345KV CKT 1	
17G	03ALL	3	TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	98.7	0.45024	233.8435	G1524G1525 345.00 - THISTLE7 345.00 345KV CKT 2	
17G	03ALL	3	TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	98.7	0.44827	230.2021	MATHWSN7 345.00 - TATONGA7 345.00 345KV CKT 1	
17G	03ALL	3	TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	98.7	0.44827	223.2112	G11_051T 345.00 - TATONGA7 345.00 345KV CKT 1	
16WP	03ALL	3	TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	102.2	0.45007	221.4659	G1524G1525 345.00 - THISTLE7 345.00 345KV CKT 1	
16WP	03ALL	3	TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	102.2	0.45007	221.4659	G1524G1525 345.00 - THISTLE7 345.00 345KV CKT 2	
17G	03ALL	3	TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	98.7	0.44827	221.1848	G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1	
17G	03ALL	3	TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	98.7	0.44654	219.4904	G13-010T 345.00 - POST ROCK 345KV CKT 1	
16WP	03ALL	3	TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	102.2	0.44803	219.145	MATHWSN7 345.00 - TATONGA7 345.00 345KV CKT 1	
17SP	03ALL	3	TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	101.7	0.46634	217.4593	G1524G1525 345.00 - THISTLE7 345.00 345KV CKT 1	
17SP	03ALL	3	TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	101.7	0.46634	217.4593	G1524G1525 345.00 - THISTLE7 345.00 345KV CKT 2	
17G	03ALL	3	TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	98.7	0.44654	217.2615	G13-010T 345.00 - G16-049-TAP 345.00 345KV CKT 1	
17G	03ALL	3	TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	98.7	0.44468	217.2373	VIOLA 7 345.00 - WICHITA 345KV CKT 1	
17G	03ALL	3	TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	98.7	0.4467	214.7794	G1524G1525 345.00 - WICHITA 345KV CKT 1	
17G	03ALL	3	TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	98.7	0.4467	214.7794	G1524G1525 345.00 - WICHITA 345KV CKT 2	
17SP	03ALL	3	TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	101.7	0.46441	214.3047	MATHWSN7 345.00 - TATONGA7 345.00 345KV CKT 1	
17G	03ALL	3	TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	98.7	0.42862	213.7058	VIOLA 7 345.00 (VIOLA 1X) 345/138/13.8KV TRANSFORMER CKT 1	
20WP	03ALL	3	TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	102.7	0.46485	213.5165	G1524G1525 345.00 - THISTLE7 345.00 345KV CKT 1	
20WP	03ALL	3	TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	102.7	0.46485	213.5165	G1524G1525 345.00 - THISTLE7 345.00 345KV CKT 2	
17G	03ALL	3	TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	98.7	0.44763	213.4546	BENTON - WICHITA 345KV CKT 1	
16WP	03ALL	3	TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	102.2	0.44803	213.1763	G11_051T 345.00 - TATONGA7 345.00 345KV CKT 1	
17G	03ALL	3	TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	98.7	0.4453	212.1478	G1524G1525 345.00 - WICHITA 345KV CKT 1	
16WP	03ALL	3	TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	102.2	0.44803	211.2194	G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1	
17G	03ALL	3	TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	98.7	0.44654	210.3071	G16-049-TAP 345.00 - SPEARVILLE 345KV CKT 1	
16WP	03ALL	3	TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	102.2	0.44648	208.8832	G13-010T 345.00 - POST ROCK 345KV CKT 1	
17G	03ALL	3	TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	98.7	0.4453	208.5004	MILAN 4 - MILAN TAP 138KV CKT 1	
17G	03ALL	3	TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	98.7	0.4453	208.5004	MILAN 4 (MILAN 4) 138/34.5/12.47KV TRANSFORMER CKT 1	
17G	03ALL	3	TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	98.7	0.4453	208.5004	P12:138:MKEC:BLUFFCITY-MILANTAP::	
17G	03ALL	3	TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	98.7	0.4453	208.0951	WOLF CREEK 345/25.0KV TRANSFORMER CKT 1	
17SP	03ALL	3	TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	101.7	0.46441	208.0117	G11_051T 345.00 - TATONGA7 345.00 345KV CKT 1	
16WP	03ALL	3	TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	102.2	0.44648	206.7306	G13-010T 345.00 - G16-049-TAP 345.00 345KV CKT 1	
16WP	03ALL	3	TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	102.2	0.44435	206.5385	VIOLA 7 345.00 - WICHITA 345KV CKT 1	
17SP	03ALL	3	TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	101.7	0.46283	206.2732	G13-010T 345.00 - POST ROCK 345KV CKT 1	
17SP	03ALL	3	TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	101.7	0.45986	206.0924	VIOLA 7 345.00 - WICHITA 345KV CKT 1	

SEASON	GROUP	SCENARIO	DIRECTION	SOURCE	MONITORED ELEMENT	RATE		CONTINGENCY		CONTINGENCY
						(MVA)	TDF	LOADING %		
17SP	03ALL		3 TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	101.7	0.46441	206.0451	G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1	
17SP	03ALL		3 TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	101.7	0.46283	204.11	G13-010T 345.00 - G16-049-TAP 345.00 345KV CKT 1	
16WP	03ALL		3 TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	102.2	0.44653	203.8279	G1524G1525 345.00 - WICHITA 345KV CKT 1	
16WP	03ALL		3 TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	102.2	0.44653	203.8279	G1524G1525 345.00 - WICHITA 345KV CKT 2	
20SP	03ALL		3 TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	95.3	0.46569	203.5663	G1524G1525 345.00 - THISTLE7 345.00 345KV CKT 1	
20SP	03ALL		3 TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	95.3	0.46569	203.5663	G1524G1525 345.00 - THISTLE7 345.00 345KV CKT 2	
20WP	03ALL		3 TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	102.7	0.46198	202.8983	G13-010T 345.00 - POST ROCK 345KV CKT 1	
16WP	03ALL		3 TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	102.2	0.44742	202.3337	BENTON - WICHITA 345KV CKT 1	
17SP	03ALL		3 TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	101.7	0.46369	201.8818	BENTON - WICHITA 345KV CKT 1	
16WP	03ALL		3 TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	102.2	0.44513	201.7757	G16-049-TAP 345.00 - SPEARVILLE 345KV CKT 1	
20WP	03ALL		3 TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	102.7	0.46198	200.8535	G13-010T 345.00 - G16-049-TAP 345.00 345KV CKT 1	
16WP	03ALL		3 TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	102.2	0.42848	200.667	VIOLA 7 345.00 (VIOLA 1X) 345/138/13.8KV TRANSFORMER CKT 1	
16WP	03ALL		3 TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	102.2	0.44655	200.5767	G16-050-TAP 345.00 - POST ROCK 345KV CKT 1	
17SP	03ALL		3 TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	101.7	0.46285	200.5456	G1524G1525 345.00 - WICHITA 345KV CKT 1	
17SP	03ALL		3 TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	101.7	0.46285	200.5456	G1524G1525 345.00 - WICHITA 345KV CKT 2	
16WP	03ALL		3 TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	102.2	0.44655	200.4789	AXTELL - G16-050-TAP 345.00 345KV CKT 1	
17G	03ALL		3 TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	98.7	0.4453	200.2937	System Intact	
16WP	03ALL		3 TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	102.2	0.44648	200.0144	G16-049-TAP 345.00 - SPEARVILLE 345KV CKT 1	
20WP	03ALL		3 TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	102.7	0.45939	199.3855	VIOLA 7 345.00 - WICHITA 345KV CKT 1	
20L	03ALL		3 TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	105.4	0.46295	199.3669	G1524G1525 345.00 - THISTLE7 345.00 345KV CKT 1	
20L	03ALL		3 TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	105.4	0.46295	199.3669	G1524G1525 345.00 - THISTLE7 345.00 345KV CKT 2	
17SP	03ALL		3 TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	101.7	0.45888	197.9465	45TH ST4 138.00 - EVANS ENERGY CENTER SOUTH 138KV CKT 1	
16WP	03ALL		3 TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	102.2	0.44513	197.8618	WOLF CREEK 345/25.0KV TRANSFORMER CKT 1	
17SP	03ALL		3 TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	101.7	0.45888	197.6515	45TH ST4 138.00 - COWSKIN 138KV CKT 1	
17SP	03ALL		3 TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	101.7	0.45888	197.5532	P12:138:WERE:COWS-GECT_138::	
20WP	03ALL		3 TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	102.7	0.4619	197.4496	G1524G1525 345.00 - WICHITA 345KV CKT 1	
20WP	03ALL		3 TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	102.7	0.4619	197.4496	G1524G1525 345.00 - WICHITA 345KV CKT 2	
17SP	03ALL		3 TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	101.7	0.46283	197.1503	G16-049-TAP 345.00 - SPEARVILLE 345KV CKT 1	
17SP	03ALL		3 TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	101.7	0.45985	196.6656	EVANS ENERGY CENTER SOUTH - LAKERIDGE 138KV CKT 1	
20WP	03ALL		3 TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	102.7	0.44283	196.6289	VIOLA 7 345.00 (VIOLA 1X) 345/138/13.8KV TRANSFORMER CKT 1	
20WP	03ALL		3 TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	102.7	0.46073	196.4543	VIOLA 7 345.00 - WICHITA 345KV CKT 1	
20WP	03ALL		3 TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	102.7	0.46271	195.8301	BENTON - WICHITA 345KV CKT 1	
17SP	03ALL		3 TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	101.7	0.43881	195.6242	VIOLA 7 345.00 (VIOLA 1X) 345/138/13.8KV TRANSFORMER CKT 1	
20SP	03ALL		3 TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	95.3	0.46267	194.7089	G13-010T 345.00 - POST ROCK 345KV CKT 1	
20WP	03ALL		3 TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	102.7	0.46198	194.2742	G16-049-TAP 345.00 - SPEARVILLE 345KV CKT 1	
20WP	03ALL		3 TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	102.7	0.46073	192.9489	WOLF CREEK 345/25.0KV TRANSFORMER CKT 1	
20WP	03ALL		3 TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	102.7	0.46149	192.9226	MATHWSN7 345.00 - TATONGA7 345.00 345KV CKT 1	
20WP	03ALL		3 TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	102.7	0.46149	192.9226	MATHWSN7 345.00 - TATONGA7 345.00 345KV CKT 2	
20SP	03ALL		3 TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	95.3	0.46267	192.4004	G13-010T 345.00 - G16-049-TAP 345.00 345KV CKT 1	
20SP	03ALL		3 TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	95.3	0.46012	191.7935	VIOLA 7 345.00 - WICHITA 345KV CKT 1	
20L	03ALL		3 TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	105.4	0.46042	190.4731	G13-010T 345.00 - POST ROCK 345KV CKT 1	
20SP	03ALL		3 TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	95.3	0.4437	190.225	VIOLA 7 345.00 (VIOLA 1X) 345/138/13.8KV TRANSFORMER CKT 1	
16WP	03ALL		3 TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	102.2	0.44513	190.034	System Intact	
20SP	03ALL		3 TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	95.3	0.4634	189.1804	BENTON - WICHITA 345KV CKT 1	
20L	03ALL		3 TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	105.4	0.46042	188.4807	G13-010T 345.00 - G16-049-TAP 345.00 345KV CKT 1	
20L	03ALL		3 TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	105.4	0.45837	188.3078	VIOLA 7 345.00 - WICHITA 345KV CKT 1	
20SP	03ALL		3 TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	95.3	0.46265	188.2587	G1524G1525 345.00 - WICHITA 345KV CKT 1	
20SP	03ALL		3 TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	95.3	0.46265	188.2587	G1524G1525 345.00 - WICHITA 345KV CKT 2	
17SP	03ALL		3 TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	101.7	0.46146	186.6961	System Intact	
20SP	03ALL		3 TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	95.3	0.45897	186.2445	45TH ST4 138.00 - EVANS ENERGY CENTER SOUTH 138KV CKT 1	
20SP	03ALL		3 TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	95.3	0.45897	185.9297	45TH ST4 138.00 - COWSKIN 138KV CKT 1	
20SP	03ALL		3 TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	95.3	0.45897	185.8248	P12:138:WERE:COWS-GECT_138::	
20L	03ALL		3 TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	105.4	0.46038	185.5804	G1524G1525 345.00 - WICHITA 345KV CKT 1	
20L	03ALL		3 TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	105.4	0.46038	185.5804	G1524G1525 345.00 - WICHITA 345KV CKT 2	
20SP	03ALL		3 TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	95.3	0.46267	185.3	G16-049-TAP 345.00 - SPEARVILLE 345KV CKT 1	

SEASON	GROUP	SCENARIO	DIRECTION	SOURCE	MONITORED ELEMENT	RATE		CONTINGENCY		CONTINGENCY
						(MVA)	TDF	LOADING %		
20L	03ALL		3 TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	105.4	0.4612	185.1502	BENTON - WICHITA 345KV CKT 1	
20SP	03ALL		3 TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	95.3	0.444	184.8559	P12:138:MKEC:BLUFFCITY-MILANTAP::	
20WP	03ALL		3 TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	102.7	0.46073	184.2829	System Intact	
20L	03ALL		3 TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	105.4	0.46007	182.0115	MATHWSN7 345.00 - TATONGA7 345.00 345KV CKT 2	
20L	03ALL		3 TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	105.4	0.46042	181.9658	G16-049-TAP 345.00 - SPEARVILLE 345KV CKT 1	
20L	03ALL		3 TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	105.4	0.46007	181.9166	MATHWSN7 345.00 - TATONGA7 345.00 345KV CKT 1	
20L	03ALL		3 TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	105.4	0.45935	181.713	WOLF CREEK 345/25.0KV TRANSFORMER CKT 1	
20L	03ALL		3 TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	105.4	0.44132	177.9589	VIOLA 7 345.00 (VIOLA 1X) 345/138/13.8KV TRANSFORMER CKT 1	
20SP	03ALL		3 TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	95.3	0.46144	174.8682	System Intact	
20L	03ALL		3 TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	105.4	0.45935	173.4588	System Intact	
25SP	03ALL		3 TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	103.8	0.46607	163.3701	G1524G1525 345.00 - THISTLE7 345.00 345KV CKT 1	
25SP	03ALL		3 TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	103.8	0.46607	163.3701	G1524G1525 345.00 - THISTLE7 345.00 345KV CKT 2	
25SP	03ALL		3 TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	103.8	0.46038	162.5457	VIOLA 7 345.00 - WICHITA 345KV CKT 1	
25SP	03ALL		3 TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	103.8	0.46298	161.2324	G13-010T 345.00 - POST ROCK 345KV CKT 1	
25SP	03ALL		3 TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	103.8	0.46298	159.2093	G13-010T 345.00 - G16-049-TAP 345.00 345KV CKT 1	
25SP	03ALL		3 TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	103.8	0.44401	156.923	VIOLA 7 345.00 (VIOLA 1X) 345/138/13.8KV TRANSFORMER CKT 1	
25SP	03ALL		3 TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	103.8	0.46371	156.4456	BENTON - WICHITA 345KV CKT 1	
25SP	03ALL		3 TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	103.8	0.46474	156.2034	P12:345:OKGE-PRAIRIEWIND:WOODWARD-THISTLE::515375-539801(1)	
25SP	03ALL		3 TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	103.8	0.45925	155.9378	45TH ST4 138.00 - EVANS ENERGY CENTER SOUTH 138KV CKT 1	
25SP	03ALL		3 TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	103.8	0.45925	155.6488	45TH ST4 138.00 - COWSKIN 138KV CKT 1	
25SP	03ALL		3 TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	103.8	0.45925	155.5524	P12:138:WERE:COWS-GECT_138::	
25SP	03ALL		3 TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	103.8	0.44427	154.6535	P12:138:MKEC:BLUFFCITY-MILANTAP::	
25SP	03ALL		3 TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	103.8	0.46016	154.5771	EVANS ENERGY CENTER SOUTH - LAKERIDGE 138KV CKT 1	
25SP	03ALL		3 TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	103.8	0.46172	154.5583	EVANS ENERGY CENTER SOUTH - LAKERIDGE 138KV CKT 1	
25SP	03ALL		3 TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	103.8	0.46172	144.6354	System Intact	
17G	09ALL		0 FROM->TO	G16_026B	CROOKED CREEK (CR.CREEK T1) 230/115/13.8KV TRANSFORMER CKT 1	159.5	0.56412	108.7325	BROKEN BOW - LOUP CITY 115KV CKT 1	
17G	09ALL		0 FROM->TO	G16_026B	CROOKED CREEK (CR.CREEK T1) 230/115/13.8KV TRANSFORMER CKT 1	159.6	0.56412	108.6644	BROKEN BOW - LOUP CITY 115KV CKT 1	
16WP	09ALL		0 FROM->TO	G16_026B	CROOKED CREEK (CR.CREEK T1) 230/115/13.8KV TRANSFORMER CKT 1	159.8	0.56401	105.1651	BROKEN BOW - LOUP CITY 115KV CKT 1	
16WP	09ALL		0 FROM->TO	G16_026B	CROOKED CREEK (CR.CREEK T1) 230/115/13.8KV TRANSFORMER CKT 1	159.8	0.56401	105.1651	BROKEN BOW - LOUP CITY 115KV CKT 1	
25SP	00NR_1		2 FROM->TO	G16_018	ENOWILT - LONE OAK 138KV CKT 1	98	0.03756	238.2054	G16-063-TAP 345.00 - SUNNYSIDE 345KV CKT 1	
20SP	00NR_1		2 FROM->TO	G16_018	ENOWILT - LONE OAK 138KV CKT 1	98	0.03759	235.6937	G16-063-TAP 345.00 - SUNNYSIDE 345KV CKT 1	
17SP	00NR_1		2 FROM->TO	G16_018	ENOWILT - LONE OAK 138KV CKT 1	98	0.03763	224.4823	G16-063-TAP 345.00 - SUNNYSIDE 345KV CKT 1	
25SP	00NR_2		2 FROM->TO	G16_019	ENOWILT - LONE OAK 138KV CKT 1	98	0.03756	226.1519	G16-063-TAP 345.00 - SUNNYSIDE 345KV CKT 1	
20SP	00NR_2		2 FROM->TO	G16_019	ENOWILT - LONE OAK 138KV CKT 1	98	0.03759	223.6382	G16-063-TAP 345.00 - SUNNYSIDE 345KV CKT 1	
17SP	00NR_2		2 FROM->TO	G16_019	ENOWILT - LONE OAK 138KV CKT 1	98	0.03763	212.4262	G16-063-TAP 345.00 - SUNNYSIDE 345KV CKT 1	
25SP	00NR_1		2 TO->FROM	G16_018	ENOWILT - SARDIS 138KV CKT 1	98	0.03756	239.0218	G16-063-TAP 345.00 - SUNNYSIDE 345KV CKT 1	
20SP	00NR_1		2 TO->FROM	G16_018	ENOWILT - SARDIS 138KV CKT 1	98	0.03759	236.51	G16-063-TAP 345.00 - SUNNYSIDE 345KV CKT 1	
17SP	00NR_1		2 TO->FROM	G16_018	ENOWILT - SARDIS 138KV CKT 1	98	0.03763	225.1966	G16-063-TAP 345.00 - SUNNYSIDE 345KV CKT 1	
25SP	00NR_2		2 TO->FROM	G16_019	ENOWILT - SARDIS 138KV CKT 1	98	0.03756	226.9682	G16-063-TAP 345.00 - SUNNYSIDE 345KV CKT 1	
20SP	00NR_2		2 TO->FROM	G16_019	ENOWILT - SARDIS 138KV CKT 1	98	0.03759	224.4545	G16-063-TAP 345.00 - SUNNYSIDE 345KV CKT 1	
17SP	00NR_2		2 TO->FROM	G16_019	ENOWILT - SARDIS 138KV CKT 1	98	0.03763	213.1404	G16-063-TAP 345.00 - SUNNYSIDE 345KV CKT 1	
17SP	16ALL		0 FROM->TO	G16_035	G16-035-TAP 230.00 - L3 HAWDON 230KV CKT 1	262.6	0.20893	113.7183	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z	
17SP	16ALL		0 FROM->TO	G16_035	G16-035-TAP 230.00 - L3 HAWDON 230KV CKT 1	262.6	0.20893	113.3375	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT	
17SP	16ALL		0 FROM->TO	G16_035	G16-035-TAP 230.00 - L3 HAWDON 230KV CKT 1	262.6	0.20893	112.9186	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1	
17SP	16ALL		0 FROM->TO	G16_035	G16-035-TAP 230.00 - L3 HAWDON 230KV CKT 1	262.6	0.20893	112.8425	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z	
17SP	16ALL		0 FROM->TO	G16_035	G16-035-TAP 230.00 - L3 HAWDON 230KV CKT 1	262.6	0.20893	112.8425	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1	
17SP	16ALL		0 FROM->TO	G16_035	G16-035-TAP 230.00 - L3 HAWDON 230KV CKT 1	262.6	0.19948	110.4506	RIEL - ROSEAU 500KV CKT 1	
17SP	16ALL		0 FROM->TO	G16_035	G16-035-TAP 230.00 - L3 HAWDON 230KV CKT 1	262.6	0.19948	109.9556	ROSEAU - ROSEAU 2 500.00 500KV CKT 1	
17SP	16ALL		0 FROM->TO	G16_035	G16-035-TAP 230.00 - L3 HAWDON 230KV CKT 1	262.6	0.19948	109.9556	ROSEAU - ROSEAU 2 500.00 500KV CKT 1	
17SP	16ALL		0 FROM->TO	G16_035	G16-035-TAP 230.00 - L3 HAWDON 230KV CKT 1	262.6	0.19948	109.3844	FORBES - ROSEAU 500KV CKT 1	
25SP	16ALL		0 FROM->TO	G16_035	G16-035-TAP 230.00 - L3 HAWDON 230KV CKT 1	262.2	0.20554	107.4246	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z	
25SP	16ALL		0 FROM->TO	G16_035	G16-035-TAP 230.00 - L3 HAWDON 230KV CKT 1	262.2	0.20554	107.1195	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT	
25SP	16ALL		0 FROM->TO	G16_035	G16-035-TAP 230.00 - L3 HAWDON 230KV CKT 1	262.2	0.20554	106.7763	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1	
25SP	16ALL		0 FROM->TO	G16_035	G16-035-TAP 230.00 - L3 HAWDON 230KV CKT 1	262.2	0.20554	106.7	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z	
25SP	16ALL		0 FROM->TO	G16_035	G16-035-TAP 230.00 - L3 HAWDON 230KV CKT 1	262.2	0.20554	106.7	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1	

SEASON	GROUP	SCENARIO	DIRECTION	SOURCE	MONITORED ELEMENT	RATE		CONTINGENCY		CONTINGENCY
						(MVA)	TDF	LOADING %		
17G	16ALL	0	FROM->TO	G16_035	G16-035-TAP 230.00 - L3 HAWDON 230KV CKT 1	263.2	0.20741	106.3693	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z	
17G	16ALL	0	FROM->TO	G16_035	G16-035-TAP 230.00 - L3 HAWDON 230KV CKT 1	263.2	0.20741	106.0653	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT	
17G	16ALL	0	FROM->TO	G16_035	G16-035-TAP 230.00 - L3 HAWDON 230KV CKT 1	263.2	0.20741	105.7234	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1	
17G	16ALL	0	FROM->TO	G16_035	G16-035-TAP 230.00 - L3 HAWDON 230KV CKT 1	263.2	0.20741	105.6474	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z	
17G	16ALL	0	FROM->TO	G16_035	G16-035-TAP 230.00 - L3 HAWDON 230KV CKT 1	263.2	0.20741	105.6474	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1	
17SP	16ALL	0	FROM->TO	G16_035	G16-035-TAP 230.00 - L3 HAWDON 230KV CKT 1	262.6	0.20254	103.7134	ANTELOP-LNX3345.00 - ANTELOPE VALLEY 345KV CKT Z	
20SP	16ALL	0	FROM->TO	G16_035	G16-035-TAP 230.00 - L3 HAWDON 230KV CKT 1	263.1	0.20544	103.6852	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z	
17SP	16ALL	0	FROM->TO	G16_035	G16-035-TAP 230.00 - L3 HAWDON 230KV CKT 1	262.6	0.20254	103.6373	P12:345:UMZB:# 102 #: AVS BD IN ND. AVS BRD LR	
17SP	16ALL	0	FROM->TO	G16_035	G16-035-TAP 230.00 - L3 HAWDON 230KV CKT 1	262.6	0.20254	103.6373	P12:345:UMZB:# 103 #: BD IN SD. LOSS OF LINE	
25SP	16ALL	0	FROM->TO	G16_035	G16-035-TAP 230.00 - L3 HAWDON 230KV CKT 1	262.2	0.19631	103.5365	RIEL - ROSEAU 500KV CKT 1	
20SP	16ALL	0	FROM->TO	G16_035	G16-035-TAP 230.00 - L3 HAWDON 230KV CKT 1	263.1	0.20544	103.3811	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT	
17SP	16ALL	0	FROM->TO	G16_035	G16-035-TAP 230.00 - L3 HAWDON 230KV CKT 1	262.6	0.20254	103.3707	ANTELOP-LNX3345.00 - BRDLAND-LNX3345.00 345KV CKT 1	
17SP	16ALL	0	FROM->TO	G16_035	G16-035-TAP 230.00 - L3 HAWDON 230KV CKT 1	262.6	0.20254	103.3707	BRDLAND-LNX3345.00 - HURON 345KV CKT Z	
17SP	16ALL	0	FROM->TO	G16_035	G16-035-TAP 230.00 - L3 HAWDON 230KV CKT 1	262.6	0.20254	103.3707	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	
17SP	16ALL	0	FROM->TO	G16_035	G16-035-TAP 230.00 - L3 HAWDON 230KV CKT 1	262.6	0.20254	103.3707	P13:345:UMZB:# 244 #: BD IN SD. LOSS OF TX	
17SP	16ALL	0	FROM->TO	G16_035	G16-035-TAP 230.00 - L3 HAWDON 230KV CKT 1	262.6	0.20254	103.3326	BROADLAND - HURON 230KV CKT 1	
25SP	16ALL	0	FROM->TO	G16_035	G16-035-TAP 230.00 - L3 HAWDON 230KV CKT 1	262.2	0.19631	103.0789	ROSEAU - ROSEAU 2 500.00 500KV CKT 1	
25SP	16ALL	0	FROM->TO	G16_035	G16-035-TAP 230.00 - L3 HAWDON 230KV CKT 1	262.2	0.19631	103.0789	ROSEAU - ROSEAU 2 500.00 500KV CKT 1	
20SP	16ALL	0	FROM->TO	G16_035	G16-035-TAP 230.00 - L3 HAWDON 230KV CKT 1	263.1	0.20544	103.0391	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1	
20SP	16ALL	0	FROM->TO	G16_035	G16-035-TAP 230.00 - L3 HAWDON 230KV CKT 1	263.1	0.20544	102.9631	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z	
20SP	16ALL	0	FROM->TO	G16_035	G16-035-TAP 230.00 - L3 HAWDON 230KV CKT 1	263.1	0.20544	102.9631	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1	
25SP	16ALL	0	FROM->TO	G16_035	G16-035-TAP 230.00 - L3 HAWDON 230KV CKT 1	262.2	1	102.7952	BISMARCK - G16-035-TAP 230.00 230KV CKT 1	
25SP	16ALL	0	FROM->TO	G16_035	G16-035-TAP 230.00 - L3 HAWDON 230KV CKT 1	262.2	0.19631	102.6212	FORBES - ROSEAU 500KV CKT 1	
20SP	16ALL	0	FROM->TO	G16_035	G16-035-TAP 230.00 - L3 HAWDON 230KV CKT 1	263.1	1	102.4815	BISMARCK - G16-035-TAP 230.00 230KV CKT 1	
17G	16ALL	0	FROM->TO	G16_035	G16-035-TAP 230.00 - L3 HAWDON 230KV CKT 1	263.2	1	102.4426	BISMARCK - G16-035-TAP 230.00 230KV CKT 1	
16WP	16ALL	0	FROM->TO	G16_035	G16-035-TAP 230.00 - L3 HAWDON 230KV CKT 1	263.4	1	102.4408	BISMARCK - G16-035-TAP 230.00 230KV CKT 1	
20WP	16ALL	0	FROM->TO	G16_035	G16-035-TAP 230.00 - L3 HAWDON 230KV CKT 1	263.5	1	102.4398	BISMARCK - G16-035-TAP 230.00 230KV CKT 1	
20L	16ALL	0	FROM->TO	G16_035	G16-035-TAP 230.00 - L3 HAWDON 230KV CKT 1	263.9	1	102.1709	BISMARCK - G16-035-TAP 230.00 230KV CKT 1	
17SP	16ALL	0	FROM->TO	G16_035	G16-035-TAP 230.00 - L3 HAWDON 230KV CKT 1	262.6	0.20282	101.8412	BISON - HETINGER 230KV CKT 1	
17SP	16ALL	0	FROM->TO	G16_035	G16-035-TAP 230.00 - L3 HAWDON 230KV CKT 1	262.6	0.20028	101.1839	GROTON - GROTON-LNX3 345.00 345KV CKT Z	
17SP	16ALL	0	FROM->TO	G16_035	G16-035-TAP 230.00 - L3 HAWDON 230KV CKT 1	262.6	0.20282	101.1558	BISON - MAURINE 230KV CKT 1	
20SP	16ALL	0	FROM->TO	G16_035	G16-035-TAP 230.00 - L3 HAWDON 230KV CKT 1	263.1	0.19626	101.0783	RIEL - ROSEAU 500KV CKT 1	
20SP	16ALL	0	FROM->TO	G16_035	G16-035-TAP 230.00 - L3 HAWDON 230KV CKT 1	263.1	0.19626	100.5842	ROSEAU - ROSEAU 2 500.00 500KV CKT 1	
20SP	16ALL	0	FROM->TO	G16_035	G16-035-TAP 230.00 - L3 HAWDON 230KV CKT 1	263.1	0.19626	100.5842	ROSEAU - ROSEAU 2 500.00 500KV CKT 1	
17G	16ALL	0	FROM->TO	G16_035	G16-035-TAP 230.00 - L3 HAWDON 230KV CKT 1	263.2	0.19833	100.5407	RIEL - ROSEAU 500KV CKT 1	
17G	16ALL	0	FROM->TO	G16_035	G16-035-TAP 230.00 - L3 HAWDON 230KV CKT 1	263.2	0.19833	100.1987	ROSEAU - ROSEAU 2 500.00 500KV CKT 1	
17G	16ALL	0	FROM->TO	G16_035	G16-035-TAP 230.00 - L3 HAWDON 230KV CKT 1	263.2	0.19833	100.1987	ROSEAU - ROSEAU 2 500.00 500KV CKT 1	
20SP	16ALL	0	FROM->TO	G16_035	G16-035-TAP 230.00 - L3 HAWDON 230KV CKT 1	263.1	0.19626	100.0901	FORBES - ROSEAU 500KV CKT 1	
17SP	16ALL	2	FROM->TO	G16_035	G16-035-TAP 230.00 - L3 HAWDON 230KV CKT 1	263.4	0.20893	112.5757	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT	
25SP	16ALL	2	FROM->TO	G16_035	G16-035-TAP 230.00 - L3 HAWDON 230KV CKT 1	263.2	0.20554	106.4466	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT	
17G	16ALL	2	FROM->TO	G16_035	G16-035-TAP 230.00 - L3 HAWDON 230KV CKT 1	263.7	0.2074	105.4437	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT	
20SP	16ALL	2	FROM->TO	G16_035	G16-035-TAP 230.00 - L3 HAWDON 230KV CKT 1	263.7	0.20544	103.0322	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT	
20SP	00_2	0	FROM->TO	G16_019	G16-063-TAP 345.00 - HUGO 345KV CKT 1	1194.9	1	107.7275	G16-063-TAP 345.00 - SUNNYSIDE 345KV CKT 1	
17SP	00_2	0	FROM->TO	G16_019	G16-063-TAP 345.00 - HUGO 345KV CKT 1	1195	1	107.7268	G16-063-TAP 345.00 - SUNNYSIDE 345KV CKT 1	
25SP	00_2	0	FROM->TO	G16_019	G16-063-TAP 345.00 - HUGO 345KV CKT 1	1195	1	107.685	G16-063-TAP 345.00 - SUNNYSIDE 345KV CKT 1	
20WP	00_2	0	FROM->TO	G16_019	G16-063-TAP 345.00 - HUGO 345KV CKT 1	1194.4	1	105.3981	G16-063-TAP 345.00 - SUNNYSIDE 345KV CKT 1	
16WP	00_2	0	FROM->TO	G16_019	G16-063-TAP 345.00 - HUGO 345KV CKT 1	1194.7	1	105.3633	G16-063-TAP 345.00 - SUNNYSIDE 345KV CKT 1	
20SP	00_2	0	FROM->TO	G16_019	G16-063-TAP 345.00 - SUNNYSIDE 345KV CKT 1	1193.6	1	107.8448	G16-063-TAP 345.00 - HUGO 345KV CKT 1	
17SP	00_2	0	FROM->TO	G16_019	G16-063-TAP 345.00 - SUNNYSIDE 345KV CKT 1	1193.8	1	107.8351	G16-063-TAP 345.00 - HUGO 345KV CKT 1	
25SP	00_2	0	FROM->TO	G16_019	G16-063-TAP 345.00 - SUNNYSIDE 345KV CKT 1	1194.3	1	107.7481	G16-063-TAP 345.00 - HUGO 345KV CKT 1	
20WP	00_2	0	FROM->TO	G16_019	G16-063-TAP 345.00 - SUNNYSIDE 345KV CKT 1	1192.3	1	105.5837	G16-063-TAP 345.00 - HUGO 345KV CKT 1	
16WP	00_2	0	FROM->TO	G16_019	G16-063-TAP 345.00 - SUNNYSIDE 345KV CKT 1	1193.3	1	105.4869	G16-063-TAP 345.00 - HUGO 345KV CKT 1	
17SP	16ALL	0	TO->FROM	G16_035	GLENHAM - L3 HAWDON 230KV CKT 1	263.6	0.20893	119.7361	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z	
17SP	16ALL	0	TO->FROM	G16_035	GLENHAM - L3 HAWDON 230KV CKT 1	263.6	0.20893	119.3947	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT	
17SP	16ALL	0	TO->FROM	G16_035	GLENHAM - L3 HAWDON 230KV CKT 1	263.6	0.20893	118.9774	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1	

SEASON	GROUP	SCENARIO	DIRECTION	SOURCE	MONITORED ELEMENT	RATE		CONTINGENCY		CONTINGENCY
						(MVA)	TDF	LOADING %		
17SP	16ALL	0	TO->FROM	G16_035	GLENHAM - L3 HAWDON 230KV CKT 1	263.6	0.20893	118.8636	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z	
17SP	16ALL	0	TO->FROM	G16_035	GLENHAM - L3 HAWDON 230KV CKT 1	263.6	0.20893	118.8636	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1	
17G	16ALL	0	TO->FROM	G16_035	GLENHAM - L3 HAWDON 230KV CKT 1	264	0.20741	118.1303	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z	
17G	16ALL	0	TO->FROM	G16_035	GLENHAM - L3 HAWDON 230KV CKT 1	264	0.20741	117.8651	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT	
17G	16ALL	0	TO->FROM	G16_035	GLENHAM - L3 HAWDON 230KV CKT 1	264	0.20741	117.5242	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1	
17G	16ALL	0	TO->FROM	G16_035	GLENHAM - L3 HAWDON 230KV CKT 1	264	0.20741	117.4106	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z	
17G	16ALL	0	TO->FROM	G16_035	GLENHAM - L3 HAWDON 230KV CKT 1	264	0.20741	117.4106	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1	
17SP	16ALL	0	TO->FROM	G16_035	GLENHAM - L3 HAWDON 230KV CKT 1	263.6	0.19948	116.5187	RIEL - ROSEAU 500KV CKT 1	
17SP	16ALL	0	TO->FROM	G16_035	GLENHAM - L3 HAWDON 230KV CKT 1	263.6	0.19948	115.9876	ROSEAU - ROSEAUM 2 500.00 500KV CKT 1	
17SP	16ALL	0	TO->FROM	G16_035	GLENHAM - L3 HAWDON 230KV CKT 1	263.6	0.19948	115.9876	ROSEAU - ROSEAUM 2 500.00 500KV CKT 1	
17SP	16ALL	0	TO->FROM	G16_035	GLENHAM - L3 HAWDON 230KV CKT 1	263.6	0.19948	115.4565	FORBES - ROSEAU 500KV CKT 1	
20WP	16ALL	0	TO->FROM	G16_035	GLENHAM - L3 HAWDON 230KV CKT 1	263.6	1	115.0717	BISMARCK - G16-035-TAP 230.00 230KV CKT 1	
16WP	16ALL	0	TO->FROM	G16_035	GLENHAM - L3 HAWDON 230KV CKT 1	263.7	1	114.8763	BISMARCK - G16-035-TAP 230.00 230KV CKT 1	
25SP	16ALL	0	TO->FROM	G16_035	GLENHAM - L3 HAWDON 230KV CKT 1	263.6	0.20554	114.5552	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z	
20L	16ALL	0	TO->FROM	G16_035	GLENHAM - L3 HAWDON 230KV CKT 1	263.7	1	114.4592	BISMARCK - G16-035-TAP 230.00 230KV CKT 1	
25SP	16ALL	0	TO->FROM	G16_035	GLENHAM - L3 HAWDON 230KV CKT 1	263.6	0.20554	114.2137	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT	
25SP	16ALL	0	TO->FROM	G16_035	GLENHAM - L3 HAWDON 230KV CKT 1	263.6	0.20554	113.8723	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1	
25SP	16ALL	0	TO->FROM	G16_035	GLENHAM - L3 HAWDON 230KV CKT 1	263.6	0.20554	113.7964	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z	
25SP	16ALL	0	TO->FROM	G16_035	GLENHAM - L3 HAWDON 230KV CKT 1	263.6	0.20554	113.7964	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1	
17G	16ALL	0	TO->FROM	G16_035	GLENHAM - L3 HAWDON 230KV CKT 1	264	0.19833	112.3572	RIEL - ROSEAU 500KV CKT 1	
20L	16ALL	0	TO->FROM	G16_035	GLENHAM - L3 HAWDON 230KV CKT 1	263.7	0.20428	112.1189	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z	
17G	16ALL	0	TO->FROM	G16_035	GLENHAM - L3 HAWDON 230KV CKT 1	264	0.19833	112.0163	ROSEAU - ROSEAUM 2 500.00 500KV CKT 1	
17G	16ALL	0	TO->FROM	G16_035	GLENHAM - L3 HAWDON 230KV CKT 1	264	0.19833	112.0163	ROSEAU - ROSEAUM 2 500.00 500KV CKT 1	
20L	16ALL	0	TO->FROM	G16_035	GLENHAM - L3 HAWDON 230KV CKT 1	263.7	0.20428	111.9293	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT	
20L	16ALL	0	TO->FROM	G16_035	GLENHAM - L3 HAWDON 230KV CKT 1	263.7	0.20428	111.7018	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1	
20L	16ALL	0	TO->FROM	G16_035	GLENHAM - L3 HAWDON 230KV CKT 1	263.7	0.20428	111.6639	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z	
20L	16ALL	0	TO->FROM	G16_035	GLENHAM - L3 HAWDON 230KV CKT 1	263.7	0.20428	111.6639	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1	
17G	16ALL	0	TO->FROM	G16_035	GLENHAM - L3 HAWDON 230KV CKT 1	264	0.19833	111.6375	FORBES - ROSEAU 500KV CKT 1	
25SP	16ALL	0	TO->FROM	G16_035	GLENHAM - L3 HAWDON 230KV CKT 1	263.6	0.19631	110.6877	RIEL - ROSEAU 500KV CKT 1	
25SP	16ALL	0	TO->FROM	G16_035	GLENHAM - L3 HAWDON 230KV CKT 1	263.6	0.19631	110.2325	ROSEAU - ROSEAUM 2 500.00 500KV CKT 1	
25SP	16ALL	0	TO->FROM	G16_035	GLENHAM - L3 HAWDON 230KV CKT 1	263.6	0.19631	110.2325	ROSEAU - ROSEAUM 2 500.00 500KV CKT 1	
20SP	16ALL	0	TO->FROM	G16_035	GLENHAM - L3 HAWDON 230KV CKT 1	264	0.20544	110.0363	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z	
25SP	16ALL	0	TO->FROM	G16_035	GLENHAM - L3 HAWDON 230KV CKT 1	263.6	1	109.9123	BISMARCK - G16-035-TAP 230.00 230KV CKT 1	
25SP	16ALL	0	TO->FROM	G16_035	GLENHAM - L3 HAWDON 230KV CKT 1	263.6	0.19631	109.7773	FORBES - ROSEAU 500KV CKT 1	
17SP	16ALL	0	TO->FROM	G16_035	GLENHAM - L3 HAWDON 230KV CKT 1	263.6	0.20254	109.7691	ANTELOP-LNX3345.00 - ANTELOPE VALLEY 345KV CKT Z	
20SP	16ALL	0	TO->FROM	G16_035	GLENHAM - L3 HAWDON 230KV CKT 1	264	0.20544	109.7333	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT	
17SP	16ALL	0	TO->FROM	G16_035	GLENHAM - L3 HAWDON 230KV CKT 1	263.6	0.20254	109.6933	P12:345:UMZB:# 102 #: AVS BD IN ND. AVS BRD LR	
17SP	16ALL	0	TO->FROM	G16_035	GLENHAM - L3 HAWDON 230KV CKT 1	263.6	0.20254	109.6933	P12:345:UMZB:# 103 #: BD IN SD. LOSS OF LINE	
17SP	16ALL	0	TO->FROM	G16_035	GLENHAM - L3 HAWDON 230KV CKT 1	263.6	0.20254	109.4656	ANTELOP-LNX3345.00 - BRDLAND-LNX3345.00 345KV CKT 1	
17SP	16ALL	0	TO->FROM	G16_035	GLENHAM - L3 HAWDON 230KV CKT 1	263.6	0.20254	109.4656	BRDLAND-LNX3345.00 - HURON 345KV CKT Z	
17SP	16ALL	0	TO->FROM	G16_035	GLENHAM - L3 HAWDON 230KV CKT 1	263.6	0.20254	109.4277	BROADLAND - HURON 230KV CKT 1	
17SP	16ALL	0	TO->FROM	G16_035	GLENHAM - L3 HAWDON 230KV CKT 1	263.6	0.20254	109.4277	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	
17SP	16ALL	0	TO->FROM	G16_035	GLENHAM - L3 HAWDON 230KV CKT 1	263.6	0.20254	109.4277	P13:345:UMZB:# 244 #: BD IN SD. LOSS OF TX	
20SP	16ALL	0	TO->FROM	G16_035	GLENHAM - L3 HAWDON 230KV CKT 1	264	0.20544	109.3924	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1	
20SP	16ALL	0	TO->FROM	G16_035	GLENHAM - L3 HAWDON 230KV CKT 1	264	0.20544	109.3166	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z	
20SP	16ALL	0	TO->FROM	G16_035	GLENHAM - L3 HAWDON 230KV CKT 1	264	0.20544	109.3166	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1	
17G	16ALL	0	TO->FROM	G16_035	GLENHAM - L3 HAWDON 230KV CKT 1	264	0.20121	108.8868	ANTELOP-LNX3345.00 - ANTELOPE VALLEY 345KV CKT Z	
20SP	16ALL	0	TO->FROM	G16_035	GLENHAM - L3 HAWDON 230KV CKT 1	264	1	108.8367	BISMARCK - G16-035-TAP 230.00 230KV CKT 1	
17G	16ALL	0	TO->FROM	G16_035	GLENHAM - L3 HAWDON 230KV CKT 1	264	0.20121	108.8111	P12:345:UMZB:# 102 #: AVS BD IN ND. AVS BRD LR	
17G	16ALL	0	TO->FROM	G16_035	GLENHAM - L3 HAWDON 230KV CKT 1	264	0.20121	108.8111	P12:345:UMZB:# 103 #: BD IN SD. LOSS OF LINE	
17G	16ALL	0	TO->FROM	G16_035	GLENHAM - L3 HAWDON 230KV CKT 1	264	0.20121	108.5837	ANTELOP-LNX3345.00 - BRDLAND-LNX3345.00 345KV CKT 1	
17G	16ALL	0	TO->FROM	G16_035	GLENHAM - L3 HAWDON 230KV CKT 1	264	0.20121	108.5837	BRDLAND-LNX3345.00 - HURON 345KV CKT Z	
17G	16ALL	0	TO->FROM	G16_035	GLENHAM - L3 HAWDON 230KV CKT 1	264	0.20121	108.5837	BROADLAND - HURON 230KV CKT 1	
17G	16ALL	0	TO->FROM	G16_035	GLENHAM - L3 HAWDON 230KV CKT 1	264	0.20121	108.5837	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	
17G	16ALL	0	TO->FROM	G16_035	GLENHAM - L3 HAWDON 230KV CKT 1	264	0.20121	108.5837	P13:345:UMZB:# 244 #: BD IN SD. LOSS OF TX	

SEASON	GROUP	SCENARIO	DIRECTION	SOURCE	MONITORED ELEMENT	RATE		CONTINGENCY		CONTINGENCY
						(MVA)	TDF	LOADING %		
17SP	16ALL	0	TO->FROM	G16_035	GLENHAM - L3 HAWDON 230KV CKT 1	263.6	0.20282	107.942	BISON - HETINGER 230KV CKT 1	
20SP	16ALL	0	TO->FROM	G16_035	GLENHAM - L3 HAWDON 230KV CKT 1	264	0.19626	107.4004	RIEL - ROSEAU 500KV CKT 1	
17SP	16ALL	0	TO->FROM	G16_035	GLENHAM - L3 HAWDON 230KV CKT 1	263.6	0.20028	107.2493	G16-044-TAP 345.00 - GROTON-LNX3 345.00 345KV CKT 1	
17SP	16ALL	0	TO->FROM	G16_035	GLENHAM - L3 HAWDON 230KV CKT 1	263.6	0.20282	107.2212	BISON - MAURINE 230KV CKT 1	
17G	16ALL	0	TO->FROM	G16_035	GLENHAM - L3 HAWDON 230KV CKT 1	264	0.19904	107.083	G16-044-TAP 345.00 - GROTON-LNX3 345.00 345KV CKT 1	
17G	16ALL	0	TO->FROM	G16_035	GLENHAM - L3 HAWDON 230KV CKT 1	264	0.19904	107.083	GROTON - GROTON-LNX3 345.00 345KV CKT Z	
20SP	16ALL	0	TO->FROM	G16_035	GLENHAM - L3 HAWDON 230KV CKT 1	264	0.19626	106.9458	ROSEAU - ROSEAU 2 500.00 500KV CKT 1	
20SP	16ALL	0	TO->FROM	G16_035	GLENHAM - L3 HAWDON 230KV CKT 1	264	0.19626	106.9458	ROSEAU - ROSEAU 2 500.00 500KV CKT 1	
20SP	16ALL	0	TO->FROM	G16_035	GLENHAM - L3 HAWDON 230KV CKT 1	264	0.19626	106.4155	FORBES - ROSEAU 500KV CKT 1	
17G	16ALL	0	TO->FROM	G16_035	GLENHAM - L3 HAWDON 230KV CKT 1	264	0.20154	105.9843	BISON - HETINGER 230KV CKT 1	
20L	16ALL	0	TO->FROM	G16_035	GLENHAM - L3 HAWDON 230KV CKT 1	263.7	0.19567	105.6504	RIEL - ROSEAU 500KV CKT 1	
20L	16ALL	0	TO->FROM	G16_035	GLENHAM - L3 HAWDON 230KV CKT 1	263.7	0.19567	105.4228	ROSEAU - ROSEAU 2 500.00 500KV CKT 1	
20L	16ALL	0	TO->FROM	G16_035	GLENHAM - L3 HAWDON 230KV CKT 1	263.7	0.19567	105.4228	ROSEAU - ROSEAU 2 500.00 500KV CKT 1	
25SP	16ALL	0	TO->FROM	G16_035	GLENHAM - L3 HAWDON 230KV CKT 1	263.6	0.19936	105.3525	ANTELOP-LNX3345.00 - ANTELOPE VALLEY 345KV CKT Z	
25SP	16ALL	0	TO->FROM	G16_035	GLENHAM - L3 HAWDON 230KV CKT 1	263.6	0.19936	105.2767	P12:345:UMZB:# 102 #: AVS BD IN ND. AVS BRD LR	
25SP	16ALL	0	TO->FROM	G16_035	GLENHAM - L3 HAWDON 230KV CKT 1	263.6	0.19936	105.2767	P12:345:UMZB:# 103 #: BD IN SD. LOSS OF LINE	
20L	16ALL	0	TO->FROM	G16_035	GLENHAM - L3 HAWDON 230KV CKT 1	263.7	0.19567	105.1953	FORBES - ROSEAU 500KV CKT 1	
25SP	16ALL	0	TO->FROM	G16_035	GLENHAM - L3 HAWDON 230KV CKT 1	263.6	0.19936	105.087	ANTELOP-LNX3345.00 - BRDLAND-LNX3345.00 345KV CKT 1	
25SP	16ALL	0	TO->FROM	G16_035	GLENHAM - L3 HAWDON 230KV CKT 1	263.6	0.19936	105.087	BRDLAND-LNX3345.00 - HURON 345KV CKT Z	
25SP	16ALL	0	TO->FROM	G16_035	GLENHAM - L3 HAWDON 230KV CKT 1	263.6	0.19936	105.049	BROADLAND - HURON 230KV CKT 1	
25SP	16ALL	0	TO->FROM	G16_035	GLENHAM - L3 HAWDON 230KV CKT 1	263.6	0.19936	105.049	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	
25SP	16ALL	0	TO->FROM	G16_035	GLENHAM - L3 HAWDON 230KV CKT 1	263.6	0.19936	105.049	P13:345:UMZB:# 244 #: BD IN SD. LOSS OF TX	
20L	16ALL	0	TO->FROM	G16_035	GLENHAM - L3 HAWDON 230KV CKT 1	263.7	0.19876	104.9969	BISON - HETINGER 230KV CKT 1	
25SP	16ALL	0	TO->FROM	G16_035	GLENHAM - L3 HAWDON 230KV CKT 1	263.6	0.19945	103.9778	BISON - HETINGER 230KV CKT 1	
20L	16ALL	0	TO->FROM	G16_035	GLENHAM - L3 HAWDON 230KV CKT 1	263.7	0.19876	103.7076	BISON - MAURINE 230KV CKT 1	
20L	16ALL	0	TO->FROM	G16_035	GLENHAM - L3 HAWDON 230KV CKT 1	263.7	0.19831	103.484	ANTELOP-LNX3345.00 - ANTELOPE VALLEY 345KV CKT Z	
20L	16ALL	0	TO->FROM	G16_035	GLENHAM - L3 HAWDON 230KV CKT 1	263.7	0.19831	103.4461	P12:345:UMZB:# 102 #: AVS BD IN ND. AVS BRD LR	
20L	16ALL	0	TO->FROM	G16_035	GLENHAM - L3 HAWDON 230KV CKT 1	263.7	0.19831	103.4461	P12:345:UMZB:# 103 #: BD IN SD. LOSS OF LINE	
20L	16ALL	0	TO->FROM	G16_035	GLENHAM - L3 HAWDON 230KV CKT 1	263.7	0.19831	103.3324	ANTELOP-LNX3345.00 - BRDLAND-LNX3345.00 345KV CKT 1	
20L	16ALL	0	TO->FROM	G16_035	GLENHAM - L3 HAWDON 230KV CKT 1	263.7	0.19831	103.3324	BRDLAND-LNX3345.00 - HURON 345KV CKT Z	
20L	16ALL	0	TO->FROM	G16_035	GLENHAM - L3 HAWDON 230KV CKT 1	263.7	0.19831	103.3324	BROADLAND - HURON 230KV CKT 1	
20L	16ALL	0	TO->FROM	G16_035	GLENHAM - L3 HAWDON 230KV CKT 1	263.7	0.19831	103.3324	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	
20L	16ALL	0	TO->FROM	G16_035	GLENHAM - L3 HAWDON 230KV CKT 1	263.7	0.19831	103.3324	P13:345:UMZB:# 244 #: BD IN SD. LOSS OF TX	
25SP	16ALL	0	TO->FROM	G16_035	GLENHAM - L3 HAWDON 230KV CKT 1	263.6	0.19672	102.6441	BUFFALO - JAMESTOWN 345KV CKT 1	
20SP	16ALL	0	TO->FROM	G16_035	GLENHAM - L3 HAWDON 230KV CKT 1	264	0.19927	101.0404	ANTELOP-LNX3345.00 - ANTELOPE VALLEY 345KV CKT Z	
20SP	16ALL	0	TO->FROM	G16_035	GLENHAM - L3 HAWDON 230KV CKT 1	264	0.19927	100.9646	P12:345:UMZB:# 102 #: AVS BD IN ND. AVS BRD LR	
20SP	16ALL	0	TO->FROM	G16_035	GLENHAM - L3 HAWDON 230KV CKT 1	264	0.19927	100.9646	P12:345:UMZB:# 103 #: BD IN SD. LOSS OF LINE	
20SP	16ALL	0	TO->FROM	G16_035	GLENHAM - L3 HAWDON 230KV CKT 1	264	0.19927	100.7374	ANTELOP-LNX3345.00 - BRDLAND-LNX3345.00 345KV CKT 1	
20SP	16ALL	0	TO->FROM	G16_035	GLENHAM - L3 HAWDON 230KV CKT 1	264	0.19927	100.7374	BRDLAND-LNX3345.00 - HURON 345KV CKT Z	
20SP	16ALL	0	TO->FROM	G16_035	GLENHAM - L3 HAWDON 230KV CKT 1	264	0.19927	100.7374	BROADLAND - HURON 230KV CKT 1	
20SP	16ALL	0	TO->FROM	G16_035	GLENHAM - L3 HAWDON 230KV CKT 1	264	0.19927	100.7374	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	
20SP	16ALL	0	TO->FROM	G16_035	GLENHAM - L3 HAWDON 230KV CKT 1	264	0.19927	100.7374	P13:345:UMZB:# 244 #: BD IN SD. LOSS OF TX	
16WP	16ALL	0	TO->FROM	G16_035	GLENHAM - L3 HAWDON 230KV CKT 1	263.7	0.20932	100.1829	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z	
17SP	16ALL	2	TO->FROM	G16_035	GLENHAM - L3 HAWDON 230KV CKT 1	263.8	0.20893	118.8114	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT	
17G	16ALL	2	TO->FROM	G16_035	GLENHAM - L3 HAWDON 230KV CKT 1	264	0.2074	117.4451	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT	
25SP	16ALL	2	TO->FROM	G16_035	GLENHAM - L3 HAWDON 230KV CKT 1	263.8	0.20554	113.8618	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT	
20L	16ALL	2	TO->FROM	G16_035	GLENHAM - L3 HAWDON 230KV CKT 1	263.6	0.20427	111.7028	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT	
20SP	16ALL	2	TO->FROM	G16_035	GLENHAM - L3 HAWDON 230KV CKT 1	264	0.20544	109.5439	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT	
17G	16ALL	0	FROM->TO	G16_035	GLENHAM - WHITLOK 230KV CKT 1	258.5	0.20715	106.8593	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z	
17G	16ALL	0	FROM->TO	G16_035	GLENHAM - WHITLOK 230KV CKT 1	258.5	0.20715	106.5885	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT	
17G	16ALL	0	FROM->TO	G16_035	GLENHAM - WHITLOK 230KV CKT 1	258.5	0.20715	106.2403	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1	
17G	16ALL	0	FROM->TO	G16_035	GLENHAM - WHITLOK 230KV CKT 1	258.5	0.20715	106.1243	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z	
17G	16ALL	0	FROM->TO	G16_035	GLENHAM - WHITLOK 230KV CKT 1	258.5	0.20715	106.1243	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1	
20L	16ALL	0	FROM->TO	G16_035	GLENHAM - WHITLOK 230KV CKT 1	258.2	0.99933	105.2785	BISMARK - G16-035-TAP 230.00 230KV CKT 1	
17SP	16ALL	0	FROM->TO	G16_035	GLENHAM - WHITLOK 230KV CKT 1	259.1	0.20876	104.1927	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z	

SEASON	GROUP	SCENARIO	DIRECTION	SOURCE	MONITORED ELEMENT	RATE		CONTINGENCY		CONTINGENCY
						(MVA)	TDF	LOADING %		
17SP	16ALL	0	FROM->TO	G16_035	GLENHAM - WHITLOK 230KV CKT 1	259.1	0.20876	103.8453	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT	
17SP	16ALL	0	FROM->TO	G16_035	GLENHAM - WHITLOK 230KV CKT 1	259.1	0.20876	103.4208	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1	
17SP	16ALL	0	FROM->TO	G16_035	GLENHAM - WHITLOK 230KV CKT 1	259.1	0.20876	103.305	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z	
17SP	16ALL	0	FROM->TO	G16_035	GLENHAM - WHITLOK 230KV CKT 1	259.1	0.20876	103.305	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1	
20L	16ALL	0	FROM->TO	G16_035	GLENHAM - WHITLOK 230KV CKT 1	258.2	0.20361	102.8884	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z	
17G	16ALL	0	FROM->TO	G16_035	GLENHAM - WHITLOK 230KV CKT 1	258.5	0.99974	102.8647	BISMARCK - G16-035-TAP 230.00 230KV CKT 1	
20L	16ALL	0	FROM->TO	G16_035	GLENHAM - WHITLOK 230KV CKT 1	258.2	0.20361	102.6561	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT	
20L	16ALL	0	FROM->TO	G16_035	GLENHAM - WHITLOK 230KV CKT 1	258.2	0.20361	102.4624	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1	
20L	16ALL	0	FROM->TO	G16_035	GLENHAM - WHITLOK 230KV CKT 1	258.2	0.20361	102.385	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z	
20L	16ALL	0	FROM->TO	G16_035	GLENHAM - WHITLOK 230KV CKT 1	258.2	0.20361	102.385	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1	
17G	16ALL	0	FROM->TO	G16_035	GLENHAM - WHITLOK 230KV CKT 1	258.5	0.19807	100.9634	RIEL - ROSEAU 500KV CKT 1	
17SP	16ALL	0	FROM->TO	G16_035	GLENHAM - WHITLOK 230KV CKT 1	259.1	0.1993	100.9194	RIEL - ROSEAU 500KV CKT 1	
17G	16ALL	0	FROM->TO	G16_035	GLENHAM - WHITLOK 230KV CKT 1	258.5	0.19807	100.6152	ROSEAU - ROSEAUM 2 500.00 500KV CKT 1	
17G	16ALL	0	FROM->TO	G16_035	GLENHAM - WHITLOK 230KV CKT 1	258.5	0.19807	100.6152	ROSEAU - ROSEAUM 2 500.00 500KV CKT 1	
16WP	16ALL	0	FROM->TO	G16_035	GLENHAM - WHITLOK 230KV CKT 1	258.7	0.99977	100.5922	BISMARCK - G16-035-TAP 230.00 230KV CKT 1	
17SP	16ALL	0	FROM->TO	G16_035	GLENHAM - WHITLOK 230KV CKT 1	259.1	0.1993	100.3791	ROSEAU - ROSEAUM 2 500.00 500KV CKT 1	
17SP	16ALL	0	FROM->TO	G16_035	GLENHAM - WHITLOK 230KV CKT 1	259.1	0.1993	100.3791	ROSEAU - ROSEAUM 2 500.00 500KV CKT 1	
17G	16ALL	0	FROM->TO	G16_035	GLENHAM - WHITLOK 230KV CKT 1	258.5	0.19807	100.2284	FORBES - ROSEAU 500KV CKT 1	
17G	16ALL	2	FROM->TO	G16_035	GLENHAM - WHITLOK 230KV CKT 1	258.9	0.20714	105.9603	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT	
17SP	16ALL	2	FROM->TO	G16_035	GLENHAM - WHITLOK 230KV CKT 1	259.4	0.20876	103.1855	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT	
20L	16ALL	2	FROM->TO	G16_035	GLENHAM - WHITLOK 230KV CKT 1	258.5	0.2036	102.2627	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT	
16WP	17NR	0	FROM->TO	G16_006	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	685.7	0.04222	101.1274	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT	
16WP	17NR	0	FROM->TO	G16_006	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	685.7	0.04222	101.0836	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z	
16WP	17NR	0	FROM->TO	G16_006	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	685.7	0.04222	101.0836	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1	
16WP	17NR	0	FROM->TO	G16_006	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	685.7	0.04222	101.069	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1	
16WP	17NR	0	FROM->TO	G16_006	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	685.7	0.04222	100.9815	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z	
20SP	17NR	0	TO->FROM	G16_006	HARMONY - ST FRANCIS 115KV CKT 1	74	0.03153	153.8484	P12:115:UMZW:# 173 #: WI-WE-MS IN SD. WITTEN IS A TAP	
20SP	17NR	0	TO->FROM	G16_006	HARMONY - ST FRANCIS 115KV CKT 1	74	0.03145	152.5384	MISSION - WITTEN 115KV CKT 1	
25SP	17NR	0	TO->FROM	G16_006	HARMONY - ST FRANCIS 115KV CKT 1	74.4	0.0312	151.914	P12:115:UMZW:# 173 #: WI-WE-MS IN SD. WITTEN IS A TAP	
25SP	17NR	0	TO->FROM	G16_006	HARMONY - ST FRANCIS 115KV CKT 1	74.4	0.03112	150.6065	MISSION - WITTEN 115KV CKT 1	
16WP	17NR	0	TO->FROM	G16_006	HARMONY - ST FRANCIS 115KV CKT 1	76.4	0.03013	127.8675	MISSION - WITTEN 115KV CKT 1	
16WP	17NR	0	TO->FROM	G16_006	HARMONY - ST FRANCIS 115KV CKT 1	76.4	0.03013	127.8675	P12:115:UMZW:# 173 #: WI-WE-MS IN SD. WITTEN IS A TAP	
16WP	17NR	0	TO->FROM	G16_006	HARMONY - ST FRANCIS 115KV CKT 1	76.4	0.03013	126.0351	WINNER - WITTEN 115KV CKT 1	
16WP	17NR	0	TO->FROM	G16_006	HARMONY - ST FRANCIS 115KV CKT 1	76.4	0.03013	125.9042	P12:115:UMZW:# 172 #: WI IN SD.	
20WP	17NR	0	TO->FROM	G16_006	HARMONY - ST FRANCIS 115KV CKT 1	76.4	0.03148	125.3065	P12:115:UMZW:# 173 #: WI-WE-MS IN SD. WITTEN IS A TAP	
20WP	17NR	0	TO->FROM	G16_006	HARMONY - ST FRANCIS 115KV CKT 1	76.4	0.03139	124.2906	MISSION - WITTEN 115KV CKT 1	
16WP	17NR	0	TO->FROM	G16_006	HARMONY - ST FRANCIS 115KV CKT 1	76.4	0.03013	117.9199	GREGORY - WINNER 115KV CKT 1	
16WP	17NR	0	TO->FROM	G16_006	HARMONY - ST FRANCIS 115KV CKT 1	76.4	0.03013	109.2811	BONESTEEL - GREGORY 115KV CKT 1	
16WP	17NR	0	TO->FROM	G16_006	HARMONY - ST FRANCIS 115KV CKT 1	76.4	0.03013	109.2811	P12:115:UMZW:# 150 #: GY-BO-FR IN SD. GY-BO-FR BONESTEEL HAS FAULT INTERRUPTING DEVICES (NOT BREAKERS)	
16WP	17NR	0	TO->FROM	G16_006	HARMONY - ST FRANCIS 115KV CKT 1	76.4	0.03013	107.8414	BONESTEEL - FT RANDAL 115KV CKT 1	
17G	17NR	0	TO->FROM	G16_006	HARMONY - ST FRANCIS 115KV CKT 1	78	0.03028	103.5195	MISSION - WITTEN 115KV CKT 1	
17G	17NR	0	TO->FROM	G16_006	HARMONY - ST FRANCIS 115KV CKT 1	78	0.03028	103.5195	P12:115:UMZW:# 173 #: WI-WE-MS IN SD. WITTEN IS A TAP	
17G	17NR	0	TO->FROM	G16_006	HARMONY - ST FRANCIS 115KV CKT 1	78	0.03028	102.1092	WINNER - WITTEN 115KV CKT 1	
17G	17NR	0	TO->FROM	G16_006	HARMONY - ST FRANCIS 115KV CKT 1	78	0.03028	101.981	P12:115:UMZW:# 172 #: WI IN SD.	
20SP	17NR	0	FROM->TO	G16_006	HARMONY - VALENTINE 115KV CKT 1	73	0.03153	145.6819	P12:115:UMZW:# 173 #: WI-WE-MS IN SD. WITTEN IS A TAP	
20SP	17NR	0	FROM->TO	G16_006	HARMONY - VALENTINE 115KV CKT 1	73	0.03145	144.491	MISSION - WITTEN 115KV CKT 1	
25SP	17NR	0	FROM->TO	G16_006	HARMONY - VALENTINE 115KV CKT 1	73.4	0.0312	143.0845	P12:115:UMZW:# 173 #: WI-WE-MS IN SD. WITTEN IS A TAP	
25SP	17NR	0	FROM->TO	G16_006	HARMONY - VALENTINE 115KV CKT 1	73.4	0.03112	141.8954	MISSION - WITTEN 115KV CKT 1	
16WP	17NR	0	FROM->TO	G16_006	HARMONY - VALENTINE 115KV CKT 1	76.1	0.03013	123.641	MISSION - WITTEN 115KV CKT 1	
16WP	17NR	0	FROM->TO	G16_006	HARMONY - VALENTINE 115KV CKT 1	76.1	0.03013	123.641	P12:115:UMZW:# 173 #: WI-WE-MS IN SD. WITTEN IS A TAP	
16WP	17NR	0	FROM->TO	G16_006	HARMONY - VALENTINE 115KV CKT 1	76.1	0.03013	121.8013	WINNER - WITTEN 115KV CKT 1	
16WP	17NR	0	FROM->TO	G16_006	HARMONY - VALENTINE 115KV CKT 1	76.1	0.03013	121.6699	P12:115:UMZW:# 172 #: WI IN SD.	
20WP	17NR	0	FROM->TO	G16_006	HARMONY - VALENTINE 115KV CKT 1	76	0.03148	120.966	P12:115:UMZW:# 173 #: WI-WE-MS IN SD. WITTEN IS A TAP	
20WP	17NR	0	FROM->TO	G16_006	HARMONY - VALENTINE 115KV CKT 1	76	0.03139	119.9447	MISSION - WITTEN 115KV CKT 1	
16WP	17NR	0	FROM->TO	G16_006	HARMONY - VALENTINE 115KV CKT 1	76.1	0.03013	113.6541	GREGORY - WINNER 115KV CKT 1	

SEASON	GROUP	SCENARIO	DIRECTION	SOURCE	MONITORED ELEMENT	RATE		CONTINGENCY		CONTINGENCY
						(MVA)	TDF	LOADING %		
16WP	17NR	0	FROM->TO	G16_006	HARMONY - VALENTINE 115KV CKT 1	76.1	0.03013	104.9813		BONESTEEL - GREGORY 115KV CKT 1
16WP	17NR	0	FROM->TO	G16_006	HARMONY - VALENTINE 115KV CKT 1	76.1	0.03013	104.9813		P12:115:UMZW:# 150 #: GY-BO-FR IN SD. GY-BO-FR BONESTEEL HAS FAULT INTERRUPTING DEVICES (NOT BREAKERS)
16WP	17NR	0	FROM->TO	G16_006	HARMONY - VALENTINE 115KV CKT 1	76.1	0.03013	103.5359		BONESTEEL - FT RANDAL 115KV CKT 1
17G	03ALL	0	FROM->TO	G16_010B	HARPER - MILAN TAP 138KV CKT 1	140.2	0.37751	159.1487		G1524G1525 345.00 - THISTLE7 345.00 345KV CKT 1
17G	03ALL	0	FROM->TO	G16_010B	HARPER - MILAN TAP 138KV CKT 1	140.2	0.37751	159.1487		G1524G1525 345.00 - THISTLE7 345.00 345KV CKT 2
17G	03ALL	0	FROM->TO	G16_010B	HARPER - MILAN TAP 138KV CKT 1	140.2	0.37493	155.1219		MATHWSN7 345.00 - TATONGA7 345.00 345KV CKT 1
16WP	03ALL	0	FROM->TO	G16_010B	HARPER - MILAN TAP 138KV CKT 1	141.4	0.37742	152.1491		G1524G1525 345.00 - THISTLE7 345.00 345KV CKT 1
16WP	03ALL	0	FROM->TO	G16_010B	HARPER - MILAN TAP 138KV CKT 1	141.4	0.37742	152.1491		G1524G1525 345.00 - THISTLE7 345.00 345KV CKT 2
17G	03ALL	0	FROM->TO	G16_010B	HARPER - MILAN TAP 138KV CKT 1	140.2	0.37482	151.5471		BENTON - WICHITA 345KV CKT 1
17G	03ALL	0	FROM->TO	G16_010B	HARPER - MILAN TAP 138KV CKT 1	140.2	0.37493	151.2703		G11_051T 345.00 - TATONGA7 345.00 345KV CKT 1
17G	03ALL	0	FROM->TO	G16_010B	HARPER - MILAN TAP 138KV CKT 1	140.2	0.37347	150.4757		G13-010T 345.00 - POST ROCK 345KV CKT 1
17G	03ALL	0	FROM->TO	G16_010B	HARPER - MILAN TAP 138KV CKT 1	140.2	0.37493	150.2004		G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
17G	03ALL	0	FROM->TO	G16_010B	HARPER - MILAN TAP 138KV CKT 1	140.2	0.37347	149.1205		G13-010T 345.00 - G16-049-TAP 345.00 345KV CKT 1
16WP	03ALL	0	FROM->TO	G16_010B	HARPER - MILAN TAP 138KV CKT 1	141.4	0.37479	148.8225		MATHWSN7 345.00 - TATONGA7 345.00 345KV CKT 1
17G	03ALL	0	FROM->TO	G16_010B	HARPER - MILAN TAP 138KV CKT 1	140.2	0.37233	148.153		G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
17G	03ALL	0	FROM->TO	G16_010B	HARPER - MILAN TAP 138KV CKT 1	140.2	0.3738	147.4922		G1524G1525 345.00 - WICHITA 345KV CKT 1
17G	03ALL	0	FROM->TO	G16_010B	HARPER - MILAN TAP 138KV CKT 1	140.2	0.3738	147.4922		G1524G1525 345.00 - WICHITA 345KV CKT 2
17G	03ALL	0	FROM->TO	G16_010B	HARPER - MILAN TAP 138KV CKT 1	140.2	0.36742	147.3534		45TH ST4 138.00 - EVANS ENERGY CENTER SOUTH 138KV CKT 1
17G	03ALL	0	FROM->TO	G16_010B	HARPER - MILAN TAP 138KV CKT 1	140.2	0.36742	147.1394		45TH ST4 138.00 - COWSKIN 138KV CKT 1
17G	03ALL	0	FROM->TO	G16_010B	HARPER - MILAN TAP 138KV CKT 1	140.2	0.36742	147.0681		P12:138:WERE:COWS-GECT_138::
17G	03ALL	0	FROM->TO	G16_010B	HARPER - MILAN TAP 138KV CKT 1	140.2	0.37022	146.4948		WICHITA (WICH TX-12) 345/138/13.8KV TRANSFORMER CKT 1
17G	03ALL	0	FROM->TO	G16_010B	HARPER - MILAN TAP 138KV CKT 1	140.2	0.36929	145.8795		EVANS ENERGY CENTER SOUTH - LAKERIDGE 138KV CKT 1
17G	03ALL	0	FROM->TO	G16_010B	HARPER - MILAN TAP 138KV CKT 1	140.2	0.36666	145.6366		P13:069-138:WERE:COWS_TX-1::
16WP	03ALL	0	FROM->TO	G16_010B	HARPER - MILAN TAP 138KV CKT 1	141.4	0.37479	145.4986		G11_051T 345.00 - TATONGA7 345.00 345KV CKT 1
17G	03ALL	0	FROM->TO	G16_010B	HARPER - MILAN TAP 138KV CKT 1	140.2	0.37347	144.8473		G16-049-TAP 345.00 - SPEARVILLE 345KV CKT 1
16WP	03ALL	0	FROM->TO	G16_010B	HARPER - MILAN TAP 138KV CKT 1	141.4	0.37469	144.6553		BENTON - WICHITA 345KV CKT 1
16WP	03ALL	0	FROM->TO	G16_010B	HARPER - MILAN TAP 138KV CKT 1	141.4	0.37479	144.4377		G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
16WP	03ALL	0	FROM->TO	G16_010B	HARPER - MILAN TAP 138KV CKT 1	141.4	0.37347	144.2482		G13-010T 345.00 - POST ROCK 345KV CKT 1
17G	03ALL	0	FROM->TO	G16_010B	HARPER - MILAN TAP 138KV CKT 1	135.3	0.37233	143.7624		System Intact
16WP	03ALL	0	FROM->TO	G16_010B	HARPER - MILAN TAP 138KV CKT 1	141.4	0.37347	142.9045		G13-010T 345.00 - G16-049-TAP 345.00 345KV CKT 1
16WP	03ALL	0	FROM->TO	G16_010B	HARPER - MILAN TAP 138KV CKT 1	141.4	0.37223	142.0179		BENTON - WICHITA 345KV CKT 1
16WP	03ALL	0	FROM->TO	G16_010B	HARPER - MILAN TAP 138KV CKT 1	141.4	0.3737	141.0091		G1524G1525 345.00 - WICHITA 345KV CKT 1
16WP	03ALL	0	FROM->TO	G16_010B	HARPER - MILAN TAP 138KV CKT 1	141.4	0.3737	141.0091		G1524G1525 345.00 - WICHITA 345KV CKT 2
16WP	03ALL	0	FROM->TO	G16_010B	HARPER - MILAN TAP 138KV CKT 1	141.4	0.3673	140.1504		45TH ST4 138.00 - EVANS ENERGY CENTER SOUTH 138KV CKT 1
16WP	03ALL	0	FROM->TO	G16_010B	HARPER - MILAN TAP 138KV CKT 1	141.4	0.3673	139.9383		45TH ST4 138.00 - COWSKIN 138KV CKT 1
16WP	03ALL	0	FROM->TO	G16_010B	HARPER - MILAN TAP 138KV CKT 1	141.4	0.3673	139.9383		P12:138:WERE:COWS-GECT_138::
16WP	03ALL	0	FROM->TO	G16_010B	HARPER - MILAN TAP 138KV CKT 1	141.4	0.37011	139.4474		WICHITA (WICH TX-12) 345/138/13.8KV TRANSFORMER CKT 1
16WP	03ALL	0	FROM->TO	G16_010B	HARPER - MILAN TAP 138KV CKT 1	141.4	0.37223	139.2597		WOLF CREEK 345/25.0KV TRANSFORMER CKT 1
16WP	03ALL	0	FROM->TO	G16_010B	HARPER - MILAN TAP 138KV CKT 1	141.4	0.37347	138.7383		G16-049-TAP 345.00 - SPEARVILLE 345KV CKT 1
16WP	03ALL	0	FROM->TO	G16_010B	HARPER - MILAN TAP 138KV CKT 1	141.4	0.36654	138.6603		P13:069-138:WERE:COWS_TX-1::
17SP	03ALL	0	FROM->TO	G16_010B	HARPER - MILAN TAP 138KV CKT 1	132.9	0.37276	136.6293		ANTHONY4 138.00 - HARPER 138KV CKT 1
17SP	03ALL	0	FROM->TO	G16_010B	HARPER - MILAN TAP 138KV CKT 1	132.9	0.37276	136.554		ANTHONY4 138.00 - BLF-CTY4 138.00 138KV CKT 1
17SP	03ALL	0	FROM->TO	G16_010B	HARPER - MILAN TAP 138KV CKT 1	132.9	0.37276	136.554		P12:138:MKEC:HARPER-BLUFFCITY::
17SP	03ALL	0	FROM->TO	G16_010B	HARPER - MILAN TAP 138KV CKT 1	132.9	0.37276	136.4788		BLF-CTY4 138.00 - CLDWELL4 138.00 138KV CKT 1
17SP	03ALL	0	FROM->TO	G16_010B	HARPER - MILAN TAP 138KV CKT 1	132.9	0.37276	136.4788		CLDWELL4 138.00 - MAYFLD 4 138.00 138KV CKT 1
17SP	03ALL	0	FROM->TO	G16_010B	HARPER - MILAN TAP 138KV CKT 1	132.9	0.37276	136.4788		MAYFLD 4 138.00 - MILAN 4 138KV CKT 1
17SP	03ALL	0	FROM->TO	G16_010B	HARPER - MILAN TAP 138KV CKT 1	132.9	0.37276	132.7166		P12:138:MKEC:BLUFFCITY-MILANTAP::
16WP	03ALL	0	FROM->TO	G16_010B	HARPER - MILAN TAP 138KV CKT 1	141.4	0.37223	132.4705		System Intact
20SP	03ALL	0	FROM->TO	G16_010B	HARPER - MILAN TAP 138KV CKT 1	131.2	0.39566	128.7524		ANTHONY4 138.00 - HARPER 138KV CKT 1
20SP	03ALL	0	FROM->TO	G16_010B	HARPER - MILAN TAP 138KV CKT 1	131.2	0.39566	128.7524		P12:138:MKEC:HARPER-BLUFFCITY::
20SP	03ALL	0	FROM->TO	G16_010B	HARPER - MILAN TAP 138KV CKT 1	131.2	0.39566	128.6761		ANTHONY4 138.00 - BLF-CTY4 138.00 138KV CKT 1
20WP	03ALL	0	FROM->TO	G16_010B	HARPER - MILAN TAP 138KV CKT 1	140.6	0.39505	128.5416		ANTHONY4 138.00 - BLF-CTY4 138.00 138KV CKT 1
20WP	03ALL	0	FROM->TO	G16_010B	HARPER - MILAN TAP 138KV CKT 1	140.6	0.39505	128.5416		ANTHONY4 138.00 - HARPER 138KV CKT 1
20WP	03ALL	0	FROM->TO	G16_010B	HARPER - MILAN TAP 138KV CKT 1	140.6	0.39505	128.5416		P12:138:MKEC:HARPER-BLUFFCITY::
17SP	03ALL	0	FROM->TO	G16_010B	HARPER - MILAN TAP 138KV CKT 1	132.9	0.37276	128.4276		MILAN 4 - MILAN TAP 138KV CKT 1

SEASON	GROUP	SCENARIO	DIRECTION	SOURCE	MONITORED ELEMENT	RATE		CONTINGENCY		CONTINGENCY
						(MVA)	TDF	LOADING %		
20L	03ALL	0	FROM->TO	G16_010B	HARPER - MILAN TAP 138KV CKT 1	141.1	0.53986	126.2082	P12:138:ITCGP:FLATRIDGE-THISTLE::	
20L	03ALL	0	FROM->TO	G16_010B	HARPER - MILAN TAP 138KV CKT 1	141.1	0.53986	126.2082	THISTLE7 345.00 (THISTLE T1) 345/138/13.8KV TRANSFORMER CKT 1	
17SP	03ALL	0	FROM->TO	G16_010B	HARPER - MILAN TAP 138KV CKT 1	132.9	0.31196	126.1242	G1524G1525 345.00 - THISTLE7 345.00 345KV CKT 1	
17SP	03ALL	0	FROM->TO	G16_010B	HARPER - MILAN TAP 138KV CKT 1	132.9	0.31196	126.1242	G1524G1525 345.00 - THISTLE7 345.00 345KV CKT 2	
20WP	03ALL	0	FROM->TO	G16_010B	HARPER - MILAN TAP 138KV CKT 1	140.6	0.39505	126.1234	BLF-CTY4 138.00 - CLDWELL4 138.00 138KV CKT 1	
20SP	03ALL	0	FROM->TO	G16_010B	HARPER - MILAN TAP 138KV CKT 1	131.2	0.39566	124.7127	BLF-CTY4 138.00 - CLDWELL4 138.00 138KV CKT 1	
20WP	03ALL	0	FROM->TO	G16_010B	HARPER - MILAN TAP 138KV CKT 1	140.6	0.39505	123.7052	CLDWELL4 138.00 - MAYFLD 4 138.00 138KV CKT 1	
17SP	03ALL	0	FROM->TO	G16_010B	HARPER - MILAN TAP 138KV CKT 1	132.9	0.31002	123.1672	MATHWSN7 345.00 - TATONGA7 345.00 345KV CKT 1	
17SP	03ALL	0	FROM->TO	G16_010B	HARPER - MILAN TAP 138KV CKT 1	132.9	0.30976	123.0578	BENTON - WICHITA 345KV CKT 1	
20WP	03ALL	0	FROM->TO	G16_010B	HARPER - MILAN TAP 138KV CKT 1	140.6	0.39505	122.7095	MAYFLD 4 138.00 - MILAN 4 138KV CKT 1	
20WP	03ALL	0	FROM->TO	G16_010B	HARPER - MILAN TAP 138KV CKT 1	140.6	0.39505	122.6384	P12:138:MKEC:BLUFFCITY-MILANTAP::	
20WP	03ALL	0	FROM->TO	G16_010B	HARPER - MILAN TAP 138KV CKT 1	140.6	0.54101	121.0518	P12:138:ITCGP:FLATRIDGE-THISTLE::	
20WP	03ALL	0	FROM->TO	G16_010B	HARPER - MILAN TAP 138KV CKT 1	140.6	0.54101	121.0518	THISTLE7 345.00 (THISTLE T1) 345/138/13.8KV TRANSFORMER CKT 1	
20SP	03ALL	0	FROM->TO	G16_010B	HARPER - MILAN TAP 138KV CKT 1	131.2	0.39566	120.8255	CLDWELL4 138.00 - MAYFLD 4 138.00 138KV CKT 1	
17SP	03ALL	0	FROM->TO	G16_010B	HARPER - MILAN TAP 138KV CKT 1	132.9	0.30353	120.5373	45TH ST4 138.00 - EVANS ENERGY CENTER SOUTH 138KV CKT 1	
17SP	03ALL	0	FROM->TO	G16_010B	HARPER - MILAN TAP 138KV CKT 1	132.9	0.30896	120.3913	G13-010T 345.00 - POST ROCK 345KV CKT 1	
17SP	03ALL	0	FROM->TO	G16_010B	HARPER - MILAN TAP 138KV CKT 1	132.9	0.30353	120.3115	45TH ST4 138.00 - COWSKIN 138KV CKT 1	
17SP	03ALL	0	FROM->TO	G16_010B	HARPER - MILAN TAP 138KV CKT 1	132.9	0.30353	120.2363	P12:138:WERE:COWS-GECT_138::	
17SP	03ALL	0	FROM->TO	G16_010B	HARPER - MILAN TAP 138KV CKT 1	132.9	0.31002	120.1574	G11_051T 345.00 - TATONGA7 345.00 345KV CKT 1	
20SP	03ALL	0	FROM->TO	G16_010B	HARPER - MILAN TAP 138KV CKT 1	131.2	0.39566	119.2249	MAYFLD 4 138.00 - MILAN 4 138KV CKT 1	
17SP	03ALL	0	FROM->TO	G16_010B	HARPER - MILAN TAP 138KV CKT 1	132.9	0.3052	119.0429	EVANS ENERGY CENTER SOUTH - LAKERIDGE 138KV CKT 1	
20SP	03ALL	0	FROM->TO	G16_010B	HARPER - MILAN TAP 138KV CKT 1	131.2	0.39566	118.9963	P12:138:MKEC:BLUFFCITY-MILANTAP::	
17SP	03ALL	0	FROM->TO	G16_010B	HARPER - MILAN TAP 138KV CKT 1	123.2	0.30797	118.7127	System Intact	
20L	03ALL	0	FROM->TO	G16_010B	HARPER - MILAN TAP 138KV CKT 1	141.1	0.39387	118.5552	ANTHONY4 138.00 - HARPER 138KV CKT 1	
20L	03ALL	0	FROM->TO	G16_010B	HARPER - MILAN TAP 138KV CKT 1	141.1	0.39387	118.5552	P12:138:MKEC:HARPER-BLUFFCITY::	
20L	03ALL	0	FROM->TO	G16_010B	HARPER - MILAN TAP 138KV CKT 1	141.1	0.39387	118.4844	ANTHONY4 138.00 - BLF-CTY4 138.00 138KV CKT 1	
20WP	03ALL	0	FROM->TO	G16_010B	HARPER - MILAN TAP 138KV CKT 1	140.6	0.33132	117.8637	G1524G1525 345.00 - THISTLE7 345.00 345KV CKT 1	
20WP	03ALL	0	FROM->TO	G16_010B	HARPER - MILAN TAP 138KV CKT 1	140.6	0.33132	117.8637	G1524G1525 345.00 - THISTLE7 345.00 345KV CKT 2	
20WP	03ALL	0	FROM->TO	G16_010B	HARPER - MILAN TAP 138KV CKT 1	140.6	0.39505	117.802	MILAN 4 - MILAN TAP 138KV CKT 1	
20L	03ALL	0	FROM->TO	G16_010B	HARPER - MILAN TAP 138KV CKT 1	141.1	0.39387	117.1378	BLF-CTY4 138.00 - CLDWELL4 138.00 138KV CKT 1	
20L	03ALL	0	FROM->TO	G16_010B	HARPER - MILAN TAP 138KV CKT 1	141.1	0.39387	115.7203	CLDWELL4 138.00 - MAYFLD 4 138.00 138KV CKT 1	
25SP	03ALL	0	FROM->TO	G16_010B	HARPER - MILAN TAP 138KV CKT 1	133.8	0.3959	115.6699	ANTHONY4 138.00 - BLF-CTY4 138.00 138KV CKT 1	
25SP	03ALL	0	FROM->TO	G16_010B	HARPER - MILAN TAP 138KV CKT 1	133.8	0.3959	115.6699	ANTHONY4 138.00 - HARPER 138KV CKT 1	
25SP	03ALL	0	FROM->TO	G16_010B	HARPER - MILAN TAP 138KV CKT 1	133.8	0.3959	115.6699	P12:138:MKEC:HARPER-BLUFFCITY::	
20SP	03ALL	0	FROM->TO	G16_010B	HARPER - MILAN TAP 138KV CKT 1	131.2	0.33193	115.5563	G1524G1525 345.00 - THISTLE7 345.00 345KV CKT 1	
20SP	03ALL	0	FROM->TO	G16_010B	HARPER - MILAN TAP 138KV CKT 1	131.2	0.33193	115.5563	G1524G1525 345.00 - THISTLE7 345.00 345KV CKT 2	
20L	03ALL	0	FROM->TO	G16_010B	HARPER - MILAN TAP 138KV CKT 1	141.1	0.39387	115.1534	MAYFLD 4 138.00 - MILAN 4 138KV CKT 1	
20L	03ALL	0	FROM->TO	G16_010B	HARPER - MILAN TAP 138KV CKT 1	141.1	0.39387	115.0825	P12:138:MKEC:BLUFFCITY-MILANTAP::	
20L	03ALL	0	FROM->TO	G16_010B	HARPER - MILAN TAP 138KV CKT 1	141.1	0.39387	112.3185	MILAN 4 - MILAN TAP 138KV CKT 1	
20WP	03ALL	0	FROM->TO	G16_010B	HARPER - MILAN TAP 138KV CKT 1	140.6	0.3289	112.1665	G13-010T 345.00 - POST ROCK 345KV CKT 1	
25SP	03ALL	0	FROM->TO	G16_010B	HARPER - MILAN TAP 138KV CKT 1	133.8	0.3959	111.7835	BLF-CTY4 138.00 - CLDWELL4 138.00 138KV CKT 1	
20SP	03ALL	0	FROM->TO	G16_010B	HARPER - MILAN TAP 138KV CKT 1	131.2	0.39566	111.1457	MILAN 4 - MILAN TAP 138KV CKT 1	
20WP	03ALL	0	FROM->TO	G16_010B	HARPER - MILAN TAP 138KV CKT 1	140.6	0.3289	111.0996	G13-010T 345.00 - G16-049-TAP 345.00 345KV CKT 1	
20SP	03ALL	0	FROM->TO	G16_010B	HARPER - MILAN TAP 138KV CKT 1	131.2	0.32939	110.8101	G13-010T 345.00 - POST ROCK 345KV CKT 1	
20SP	03ALL	0	FROM->TO	G16_010B	HARPER - MILAN TAP 138KV CKT 1	131.2	0.32939	109.5906	G13-010T 345.00 - G16-049-TAP 345.00 345KV CKT 1	
25SP	03ALL	0	FROM->TO	G16_010B	HARPER - MILAN TAP 138KV CKT 1	133.8	0.54148	109.5264	P12:138:ITCGP:FLATRIDGE-THISTLE::	
25SP	03ALL	0	FROM->TO	G16_010B	HARPER - MILAN TAP 138KV CKT 1	133.8	0.54148	109.5264	THISTLE7 345.00 (THISTLE T1) 345/138/13.8KV TRANSFORMER CKT 1	
20SP	03ALL	0	FROM->TO	G16_010B	HARPER - MILAN TAP 138KV CKT 1	131.2	0.32783	109.3693	VIOLA 7 345.00 - WICHITA 345KV CKT 1	
20L	03ALL	0	FROM->TO	G16_010B	HARPER - MILAN TAP 138KV CKT 1	141.1	0.32997	109.3571	G1524G1525 345.00 - THISTLE7 345.00 345KV CKT 1	
20L	03ALL	0	FROM->TO	G16_010B	HARPER - MILAN TAP 138KV CKT 1	141.1	0.32997	109.3571	G1524G1525 345.00 - THISTLE7 345.00 345KV CKT 2	
20SP	03ALL	0	FROM->TO	G16_010B	HARPER - MILAN TAP 138KV CKT 1	131.2	0.3168	108.9478	VIOLA 7 345.00 (VIOLA 1X) 345/138/13.8KV TRANSFORMER CKT 1	
20SP	03ALL	0	FROM->TO	G16_010B	HARPER - MILAN TAP 138KV CKT 1	121.2	0.32848	108.7821	System Intact	
25SP	03ALL	0	FROM->TO	G16_010B	HARPER - MILAN TAP 138KV CKT 1	133.8	0.3959	107.8971	CLDWELL4 138.00 - MAYFLD 4 138.00 138KV CKT 1	
25SP	03ALL	0	FROM->TO	G16_010B	HARPER - MILAN TAP 138KV CKT 1	133.8	0.3959	106.4023	MAYFLD 4 138.00 - MILAN 4 138KV CKT 1	
25SP	03ALL	0	FROM->TO	G16_010B	HARPER - MILAN TAP 138KV CKT 1	133.8	0.3959	106.1034	P12:138:MKEC:BLUFFCITY-MILANTAP::	

SEASON	GROUP	SCENARIO	DIRECTION	SOURCE	MONITORED ELEMENT	RATE		CONTINGENCY		CONTINGENCY
						(MVA)	TDF	LOADING %		
20L	03ALL	0	FROM->TO	G16_010B	HARPER - MILAN TAP 138KV CKT 1	141.1	0.32778	104.4765	G13-010T 345.00 - POST ROCK 345KV CKT 1	
20L	03ALL	0	FROM->TO	G16_010B	HARPER - MILAN TAP 138KV CKT 1	141.1	0.32658	103.4559	VIOLA 7 345.00 - WICHITA 345KV CKT 1	
20WP	03ALL	0	FROM->TO	G16_010B	HARPER - MILAN TAP 138KV CKT 1	140.6	0.32797	102.4521	System Intact	
25SP	03ALL	0	FROM->TO	G16_010B	HARPER - MILAN TAP 138KV CKT 1	133.8	0.3322	100.7269	G1524G1525 345.00 - THISTLE7 345.00 345KV CKT 1	
25SP	03ALL	0	FROM->TO	G16_010B	HARPER - MILAN TAP 138KV CKT 1	133.8	0.3322	100.7269	G1524G1525 345.00 - THISTLE7 345.00 345KV CKT 2	
25SP	03ALL	0	FROM->TO	G16_010B	HARPER - MILAN TAP 138KV CKT 1	133.8	0.32802	100.2073	VIOLA 7 345.00 - WICHITA 345KV CKT 1	
16WP	03ALL	2	FROM->TO	G16_010B	HARPER - MILAN TAP 138KV CKT 1	140.4	0.67648	157.5776	P12:138:ITCGP:FLATRIDGE-THISTLE::	
16WP	03ALL	2	FROM->TO	G16_010B	HARPER - MILAN TAP 138KV CKT 1	140.4	0.67648	157.5776	THISTLE7 345.00 (THISTLE T1) 345/138/13.8KV TRANSFORMER CKT 1	
17G	03ALL	2	FROM->TO	G16_010B	HARPER - MILAN TAP 138KV CKT 1	139.2	0.40205	157.0473	G1524G1525 345.00 - THISTLE7 345.00 345KV CKT 1	
17G	03ALL	2	FROM->TO	G16_010B	HARPER - MILAN TAP 138KV CKT 1	139.2	0.40205	157.0473	G1524G1525 345.00 - THISTLE7 345.00 345KV CKT 2	
17G	03ALL	2	FROM->TO	G16_010B	HARPER - MILAN TAP 138KV CKT 1	139.2	0.39971	154.4754	MATHWSN7 345.00 - TATONGA7 345.00 345KV CKT 1	
16WP	03ALL	2	FROM->TO	G16_010B	HARPER - MILAN TAP 138KV CKT 1	140.4	0.4019	151.6837	G1524G1525 345.00 - THISTLE7 345.00 345KV CKT 1	
16WP	03ALL	2	FROM->TO	G16_010B	HARPER - MILAN TAP 138KV CKT 1	140.4	0.4019	151.6837	G1524G1525 345.00 - THISTLE7 345.00 345KV CKT 2	
17G	03ALL	2	FROM->TO	G16_010B	HARPER - MILAN TAP 138KV CKT 1	139.2	0.39971	150.0932	G11_051T 345.00 - TATONGA7 345.00 345KV CKT 1	
16WP	03ALL	2	FROM->TO	G16_010B	HARPER - MILAN TAP 138KV CKT 1	140.4	0.3995	149.9399	MATHWSN7 345.00 - TATONGA7 345.00 345KV CKT 1	
17G	03ALL	2	FROM->TO	G16_010B	HARPER - MILAN TAP 138KV CKT 1	139.2	0.39971	148.8719	G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1	
17G	03ALL	2	FROM->TO	G16_010B	HARPER - MILAN TAP 138KV CKT 1	139.2	0.39806	147.6814	G13-010T 345.00 - POST ROCK 345KV CKT 1	
17G	03ALL	2	FROM->TO	G16_010B	HARPER - MILAN TAP 138KV CKT 1	139.2	0.39686	146.4511	VIOLA 7 345.00 - WICHITA 345KV CKT 1	
17G	03ALL	2	FROM->TO	G16_010B	HARPER - MILAN TAP 138KV CKT 1	139.2	0.39806	146.3164	G13-010T 345.00 - G16-049-TAP 345.00 345KV CKT 1	
16WP	03ALL	2	FROM->TO	G16_010B	HARPER - MILAN TAP 138KV CKT 1	140.4	0.3995	146.0226	G11_051T 345.00 - TATONGA7 345.00 345KV CKT 1	
16WP	03ALL	2	FROM->TO	G16_010B	HARPER - MILAN TAP 138KV CKT 1	140.4	0.3995	144.8117	G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1	
17G	03ALL	2	FROM->TO	G16_010B	HARPER - MILAN TAP 138KV CKT 1	139.2	0.39836	144.7643	G1524G1525 345.00 - WICHITA 345KV CKT 1	
17G	03ALL	2	FROM->TO	G16_010B	HARPER - MILAN TAP 138KV CKT 1	139.2	0.39836	144.7643	G1524G1525 345.00 - WICHITA 345KV CKT 2	
17G	03ALL	2	FROM->TO	G16_010B	HARPER - MILAN TAP 138KV CKT 1	139.2	0.38361	144.7199	VIOLA 7 345.00 (VIOLA 1X) 345/138/13.8KV TRANSFORMER CKT 1	
17G	03ALL	2	FROM->TO	G16_010B	HARPER - MILAN TAP 138KV CKT 1	139.2	0.39913	143.9566	BENTON - WICHITA 345KV CKT 1	
16WP	03ALL	2	FROM->TO	G16_010B	HARPER - MILAN TAP 138KV CKT 1	140.4	0.39801	143.1794	G13-010T 345.00 - POST ROCK 345KV CKT 1	
17G	03ALL	2	FROM->TO	G16_010B	HARPER - MILAN TAP 138KV CKT 1	139.2	0.3969	143.082	P12:230:SPS:K11.1.BSHLND.DFSMTH	
17G	03ALL	2	FROM->TO	G16_010B	HARPER - MILAN TAP 138KV CKT 1	139.2	0.39806	141.8658	G16-049-TAP 345.00 - SPEARVILLE 345KV CKT 1	
16WP	03ALL	2	FROM->TO	G16_010B	HARPER - MILAN TAP 138KV CKT 1	140.4	0.39657	141.8576	VIOLA 7 345.00 - WICHITA 345KV CKT 1	
16WP	03ALL	2	FROM->TO	G16_010B	HARPER - MILAN TAP 138KV CKT 1	140.4	0.39801	141.8261	G13-010T 345.00 - G16-049-TAP 345.00 345KV CKT 1	
17G	03ALL	2	FROM->TO	G16_010B	HARPER - MILAN TAP 138KV CKT 1	139.2	0.39807	141.7296	AXTELL - G16-050-TAP 345.00 345KV CKT 1	
17G	03ALL	2	FROM->TO	G16_010B	HARPER - MILAN TAP 138KV CKT 1	139.2	0.39807	141.7296	G16-050-TAP 345.00 - POST ROCK 345KV CKT 1	
17G	03ALL	2	FROM->TO	G16_010B	HARPER - MILAN TAP 138KV CKT 1	134.2	0.3969	140.5888	System Intact	
17G	03ALL	2	FROM->TO	G16_010B	HARPER - MILAN TAP 138KV CKT 1	139.2	0.3969	140.4958	WOLF CREEK 345/25.0KV TRANSFORMER CKT 1	
16WP	03ALL	2	FROM->TO	G16_010B	HARPER - MILAN TAP 138KV CKT 1	140.4	0.3982	139.926	G1524G1525 345.00 - WICHITA 345KV CKT 1	
16WP	03ALL	2	FROM->TO	G16_010B	HARPER - MILAN TAP 138KV CKT 1	140.4	0.3982	139.926	G1524G1525 345.00 - WICHITA 345KV CKT 2	
16WP	03ALL	2	FROM->TO	G16_010B	HARPER - MILAN TAP 138KV CKT 1	140.4	0.39894	138.962	BENTON - WICHITA 345KV CKT 1	
16WP	03ALL	2	FROM->TO	G16_010B	HARPER - MILAN TAP 138KV CKT 1	140.4	0.38348	138.5496	VIOLA 7 345.00 (VIOLA 1X) 345/138/13.8KV TRANSFORMER CKT 1	
16WP	03ALL	2	FROM->TO	G16_010B	HARPER - MILAN TAP 138KV CKT 1	140.4	0.39674	138.5431	G1524G1525 345.00 - WICHITA 345KV CKT 2	
16WP	03ALL	2	FROM->TO	G16_010B	HARPER - MILAN TAP 138KV CKT 1	140.4	0.39805	137.7908	G16-050-TAP 345.00 - POST ROCK 345KV CKT 1	
16WP	03ALL	2	FROM->TO	G16_010B	HARPER - MILAN TAP 138KV CKT 1	140.4	0.39801	137.4135	G16-049-TAP 345.00 - SPEARVILLE 345KV CKT 1	
17SP	03ALL	2	FROM->TO	G16_010B	HARPER - MILAN TAP 138KV CKT 1	132.9	0.39593	132.2709	ANTHONY4 138.00 - BLF-CTY4 138.00 138KV CKT 1	
17SP	03ALL	2	FROM->TO	G16_010B	HARPER - MILAN TAP 138KV CKT 1	132.9	0.39593	132.2709	ANTHONY4 138.00 - HARPER 138KV CKT 1	
17SP	03ALL	2	FROM->TO	G16_010B	HARPER - MILAN TAP 138KV CKT 1	132.9	0.39593	132.2709	P12:138:MKEC:HARPER-BLUFFCITY::	
17SP	03ALL	2	FROM->TO	G16_010B	HARPER - MILAN TAP 138KV CKT 1	132.9	0.39593	132.1956	BLF-CTY4 138.00 - CLDWELL4 138.00 138KV CKT 1	
17SP	03ALL	2	FROM->TO	G16_010B	HARPER - MILAN TAP 138KV CKT 1	132.9	0.39593	132.1956	CLDWELL4 138.00 - MAYFLD 4 138.00 138KV CKT 1	
17SP	03ALL	2	FROM->TO	G16_010B	HARPER - MILAN TAP 138KV CKT 1	132.9	0.39593	132.1956	MAYFLD 4 138.00 - MILAN 4 138KV CKT 1	
16WP	03ALL	2	FROM->TO	G16_010B	HARPER - MILAN TAP 138KV CKT 1	140.4	0.39674	130.9932	System Intact	
17SP	03ALL	2	FROM->TO	G16_010B	HARPER - MILAN TAP 138KV CKT 1	132.9	0.39593	128.9601	P12:138:MKEC:BLUFFCITY-MILANTAP::	
17SP	03ALL	2	FROM->TO	G16_010B	HARPER - MILAN TAP 138KV CKT 1	132.9	0.39593	124.3702	MILAN 4 - MILAN TAP 138KV CKT 1	
17SP	03ALL	2	FROM->TO	G16_010B	HARPER - MILAN TAP 138KV CKT 1	132.9	0.33253	123.9613	G1524G1525 345.00 - THISTLE7 345.00 345KV CKT 1	
17SP	03ALL	2	FROM->TO	G16_010B	HARPER - MILAN TAP 138KV CKT 1	132.9	0.33253	123.9613	G1524G1525 345.00 - THISTLE7 345.00 345KV CKT 2	
17SP	03ALL	2	FROM->TO	G16_010B	HARPER - MILAN TAP 138KV CKT 1	132.9	0.33081	122.131	MATHWSN7 345.00 - TATONGA7 345.00 345KV CKT 1	
17SP	03ALL	2	FROM->TO	G16_010B	HARPER - MILAN TAP 138KV CKT 1	132.9	0.33081	118.745	G11_051T 345.00 - TATONGA7 345.00 345KV CKT 1	
17SP	03ALL	2	FROM->TO	G16_010B	HARPER - MILAN TAP 138KV CKT 1	132.9	0.32781	117.7529	VIOLA 7 345.00 - WICHITA 345KV CKT 1	

SEASON	GROUP	SCENARIO	DIRECTION	SOURCE	MONITORED ELEMENT	RATE		CONTINGENCY		CONTINGENCY
						(MVA)	TDF	LOADING %		
17SP	03ALL	2	FROM->TO	G16_010B	HARPER - MILAN TAP 138KV CKT 1	132.9	0.32962	117.7111	G13-010T 345.00 - POST ROCK 345KV CKT 1	
17SP	03ALL	2	FROM->TO	G16_010B	HARPER - MILAN TAP 138KV CKT 1	132.9	0.33081	117.6163	G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1	
17SP	03ALL	2	FROM->TO	G16_010B	HARPER - MILAN TAP 138KV CKT 1	132.9	0.32962	116.5072	G13-010T 345.00 - G16-049-TAP 345.00 345KV CKT 1	
17SP	03ALL	2	FROM->TO	G16_010B	HARPER - MILAN TAP 138KV CKT 1	123.1	0.32861	115.5769	System Intact	
17SP	03ALL	2	FROM->TO	G16_010B	HARPER - MILAN TAP 138KV CKT 1	132.9	0.33028	115.3126	BENTON - WICHITA 345KV CKT 1	
17SP	16ALL	0	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	384.4	0.07347	117.4958	System Intact	
17SP	16ALL	0	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	394.8	0.07347	114.5527	System Intact	
25SP	16ALL	0	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	386.9	0.07144	112.9	System Intact	
25SP	16ALL	0	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	395.5	0.07144	110.5967	System Intact	
20SP	16ALL	0	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	388	0.07109	110.5919	System Intact	
17G	16ALL	0	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	387.9	0.07094	109.3296	System Intact	
20SP	16ALL	0	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	395.7	0.07109	108.5662	System Intact	
17G	16ALL	0	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	395.6	0.07094	107.3533	System Intact	
16WP	16ALL	0	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	392.8	0.07228	101.1428	System Intact	
16WP	16ALL	0	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	397.6	0.07228	100.0224	System Intact	
17SP	16ALL	2	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	384.6	0.08026	117.4338	System Intact	
17SP	16ALL	2	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	394.9	0.08026	114.5227	System Intact	
25SP	16ALL	2	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	387	0.07839	112.9238	System Intact	
25SP	16ALL	2	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	395.5	0.07839	110.6486	System Intact	
20SP	16ALL	2	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	388.1	0.07805	110.5928	System Intact	
17G	16ALL	2	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	388	0.07772	109.4786	System Intact	
20SP	16ALL	2	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	395.8	0.07805	108.5677	System Intact	
17G	16ALL	2	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	395.6	0.07772	107.527	System Intact	
16WP	16ALL	2	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	392.8	0.07907	101.2946	System Intact	
16WP	16ALL	2	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	397.5	0.07907	100.1975	System Intact	
20SP	17NR	0	FROM->TO	G16_006	MISSION - ST FRANCIS 115KV CKT 1	79.7	0.03153	160.0349	P12:115:UMZW:# 173 #: WI-WE-MS IN SD. WITTEN IS A TAP	
25SP	17NR	0	FROM->TO	G16_006	MISSION - ST FRANCIS 115KV CKT 1	79.8	0.0312	159.4286	P12:115:UMZW:# 173 #: WI-WE-MS IN SD. WITTEN IS A TAP	
20SP	17NR	0	FROM->TO	G16_006	MISSION - ST FRANCIS 115KV CKT 1	79.7	0.03145	158.944	MISSION - WITTEN 115KV CKT 1	
25SP	17NR	0	FROM->TO	G16_006	MISSION - ST FRANCIS 115KV CKT 1	79.8	0.03112	158.2095	MISSION - WITTEN 115KV CKT 1	
16WP	17NR	0	FROM->TO	G16_006	MISSION - ST FRANCIS 115KV CKT 1	79.2	0.03013	135.0894	MISSION - WITTEN 115KV CKT 1	
16WP	17NR	0	FROM->TO	G16_006	MISSION - ST FRANCIS 115KV CKT 1	79.2	0.03013	135.0894	P12:115:UMZW:# 173 #: WI-WE-MS IN SD. WITTEN IS A TAP	
16WP	17NR	0	FROM->TO	G16_006	MISSION - ST FRANCIS 115KV CKT 1	79.2	0.03013	133.3217	WINNER - WITTEN 115KV CKT 1	
16WP	17NR	0	FROM->TO	G16_006	MISSION - ST FRANCIS 115KV CKT 1	79.2	0.03013	133.1955	P12:115:UMZW:# 172 #: WI IN SD.	
20WP	17NR	0	FROM->TO	G16_006	MISSION - ST FRANCIS 115KV CKT 1	78.7	0.03148	132.445	P12:115:UMZW:# 173 #: WI-WE-MS IN SD. WITTEN IS A TAP	
20WP	17NR	0	FROM->TO	G16_006	MISSION - ST FRANCIS 115KV CKT 1	78.7	0.03139	131.5858	MISSION - WITTEN 115KV CKT 1	
16WP	17NR	0	FROM->TO	G16_006	MISSION - ST FRANCIS 115KV CKT 1	79.2	0.03013	125.4934	GREGORY - WINNER 115KV CKT 1	
16WP	17NR	0	FROM->TO	G16_006	MISSION - ST FRANCIS 115KV CKT 1	79.2	0.03013	117.1601	BONESTEEL - GREGORY 115KV CKT 1	
16WP	17NR	0	FROM->TO	G16_006	MISSION - ST FRANCIS 115KV CKT 1	79.2	0.03013	117.1601	P12:115:UMZW:# 150 #: GY-BO-FR IN SD. GY-BO-FR BONESTEEL HAS FAULT INTERRUPTING DEVICES (NOT BREAKERS)	
16WP	17NR	0	FROM->TO	G16_006	MISSION - ST FRANCIS 115KV CKT 1	79.2	0.03013	115.7712	BONESTEEL - FT RANDAL 115KV CKT 1	
17G	17NR	0	FROM->TO	G16_006	MISSION - ST FRANCIS 115KV CKT 1	79.2	0.03028	110.5369	MISSION - WITTEN 115KV CKT 1	
17G	17NR	0	FROM->TO	G16_006	MISSION - ST FRANCIS 115KV CKT 1	79.2	0.03028	110.5369	P12:115:UMZW:# 173 #: WI-WE-MS IN SD. WITTEN IS A TAP	
17G	17NR	0	FROM->TO	G16_006	MISSION - ST FRANCIS 115KV CKT 1	79.2	0.03028	109.148	WINNER - WITTEN 115KV CKT 1	
17G	17NR	0	FROM->TO	G16_006	MISSION - ST FRANCIS 115KV CKT 1	79.2	0.03028	109.0217	P12:115:UMZW:# 172 #: WI IN SD.	
17G	17NR	0	FROM->TO	G16_006	MISSION - ST FRANCIS 115KV CKT 1	79.2	0.03028	103.7187	GREGORY - WINNER 115KV CKT 1	
20L	17NR	0	FROM->TO	G16_006	MISSION - ST FRANCIS 115KV CKT 1	79.3	0.03126	101.462	P12:115:UMZW:# 173 #: WI-WE-MS IN SD. WITTEN IS A TAP	
20L	17NR	0	FROM->TO	G16_006	MISSION - ST FRANCIS 115KV CKT 1	79.3	0.03116	101.2356	MISSION - WITTEN 115KV CKT 1	
20SP	17NR	0	FROM->TO	G16_006	MISSION - WITTEN 115KV CKT 1	119.8	0.0462	105.0726	MISSION - ST FRANCIS 115KV CKT 1	
20SP	17NR	0	FROM->TO	G16_006	MISSION - WITTEN 115KV CKT 1	119.8	0.0462	105.0726	P12:115:NPPD:1091:VALENTN7:MISSION7:BTB	
25SP	17NR	0	FROM->TO	G16_006	MISSION - WITTEN 115KV CKT 1	120	0.04566	103.0273	MISSION - ST FRANCIS 115KV CKT 1	
25SP	17NR	0	FROM->TO	G16_006	MISSION - WITTEN 115KV CKT 1	120	0.04566	103.0273	P12:115:NPPD:1091:VALENTN7:MISSION7:BTB	
20L	17NR	0	FROM->TO	G16_006	MISSION - WITTEN 115KV CKT 1	119.9	0.04334	101.0852	MISSION - ST FRANCIS 115KV CKT 1	
20L	17NR	0	FROM->TO	G16_006	MISSION - WITTEN 115KV CKT 1	119.9	0.04334	101.0852	P12:115:NPPD:1091:VALENTN7:MISSION7:BTB	
17G	16ALL	0	TO->FROM	G16_035	OAHE - SULLY BUTTE 230KV CKT 1	254	0.20715	103.3588	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z	
17G	16ALL	0	TO->FROM	G16_035	OAHE - SULLY BUTTE 230KV CKT 1	254	0.20715	103.0438	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT	
17G	16ALL	0	TO->FROM	G16_035	OAHE - SULLY BUTTE 230KV CKT 1	254	0.20715	102.6895	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1	

SEASON	GROUP	SCENARIO	DIRECTION	SOURCE	MONITORED ELEMENT	RATE		CONTINGENCY		CONTINGENCY
						(MVA)	TDF	LOADING %		
17G	16ALL	0	TO->FROM	G16_035	OAHE - SULLY BUTTE 230KV CKT 1	254	0.20715	102.6107	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z	
17G	16ALL	0	TO->FROM	G16_035	OAHE - SULLY BUTTE 230KV CKT 1	254	0.20715	102.6107	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1	
20L	16ALL	0	TO->FROM	G16_035	OAHE - SULLY BUTTE 230KV CKT 1	253.2	0.99933	101.5913	BISMARCK - G16-035-TAP 230.00 230KV CKT 1	
17G	16ALL	2	TO->FROM	G16_035	OAHE - SULLY BUTTE 230KV CKT 1	254.8	0.20714	102.2886	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT	
17SP	17NR	0	TO->FROM	G16_006	SCOTTSBLUFF - VICTORY HILL 115KV CKT 1	119.3	0.0921	106.8959	P13:230-345:NPPD:STEGALL3:KV3A	
17SP	17NR	0	TO->FROM	G16_006	SCOTTSBLUFF - VICTORY HILL 115KV CKT 1	119.3	0.0921	106.8959	STEGALL - STEGALL TRANSFORMER 230KV CKT 1	
17SP	17NR	0	TO->FROM	G16_006	SCOTTSBLUFF - VICTORY HILL 115KV CKT 1	119.3	0.0921	106.8959	STEGALL (SGQ KV3A) 345/230/13.8KV TRANSFORMER CKT 1	
17G	16ALL	0	TO->FROM	G16_035	SULLEY BUTTE - SULLYBT-LNX3230.00 230KV CKT Z	258.5	0.20715	104.6929	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z	
17G	16ALL	0	TO->FROM	G16_035	SULLEY BUTTE - SULLYBT-LNX3230.00 230KV CKT Z	258.5	0.20715	104.3835	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT	
17G	16ALL	0	TO->FROM	G16_035	SULLEY BUTTE - SULLYBT-LNX3230.00 230KV CKT Z	258.5	0.20715	104.0353	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1	
17G	16ALL	0	TO->FROM	G16_035	SULLEY BUTTE - SULLYBT-LNX3230.00 230KV CKT Z	258.5	0.20715	103.9579	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z	
17G	16ALL	0	TO->FROM	G16_035	SULLEY BUTTE - SULLYBT-LNX3230.00 230KV CKT Z	258.5	0.20715	103.9579	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1	
20L	16ALL	0	TO->FROM	G16_035	SULLEY BUTTE - SULLYBT-LNX3230.00 230KV CKT Z	257.9	0.99933	103.3847	BISMARCK - G16-035-TAP 230.00 230KV CKT 1	
17SP	16ALL	0	TO->FROM	G16_035	SULLEY BUTTE - SULLYBT-LNX3230.00 230KV CKT Z	255.6	0.20876	102.646	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z	
17SP	16ALL	0	TO->FROM	G16_035	SULLEY BUTTE - SULLYBT-LNX3230.00 230KV CKT Z	255.6	0.20876	102.2939	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT	
17SP	16ALL	0	TO->FROM	G16_035	SULLEY BUTTE - SULLYBT-LNX3230.00 230KV CKT Z	255.6	0.20876	101.8635	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1	
17SP	16ALL	0	TO->FROM	G16_035	SULLEY BUTTE - SULLYBT-LNX3230.00 230KV CKT Z	255.6	0.20876	101.7462	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z	
17SP	16ALL	0	TO->FROM	G16_035	SULLEY BUTTE - SULLYBT-LNX3230.00 230KV CKT Z	255.6	0.20876	101.7462	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1	
20L	16ALL	0	TO->FROM	G16_035	SULLEY BUTTE - SULLYBT-LNX3230.00 230KV CKT Z	257.9	0.20361	100.9918	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z	
20L	16ALL	0	TO->FROM	G16_035	SULLEY BUTTE - SULLYBT-LNX3230.00 230KV CKT Z	257.9	0.20361	100.798	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT	
17G	16ALL	0	TO->FROM	G16_035	SULLEY BUTTE - SULLYBT-LNX3230.00 230KV CKT Z	258.5	0.99974	100.6596	BISMARCK - G16-035-TAP 230.00 230KV CKT 1	
20L	16ALL	0	TO->FROM	G16_035	SULLEY BUTTE - SULLYBT-LNX3230.00 230KV CKT Z	257.9	0.20361	100.5653	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1	
20L	16ALL	0	TO->FROM	G16_035	SULLEY BUTTE - SULLYBT-LNX3230.00 230KV CKT Z	257.9	0.20361	100.4878	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z	
20L	16ALL	0	TO->FROM	G16_035	SULLEY BUTTE - SULLYBT-LNX3230.00 230KV CKT Z	257.9	0.20361	100.4878	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1	
17G	16ALL	2	TO->FROM	G16_035	SULLEY BUTTE - SULLYBT-LNX3230.00 230KV CKT Z	259.2	0.20714	103.6772	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT	
17SP	16ALL	2	TO->FROM	G16_035	SULLEY BUTTE - SULLYBT-LNX3230.00 230KV CKT Z	256.2	0.20876	101.4689	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT	
20L	16ALL	2	TO->FROM	G16_035	SULLEY BUTTE - SULLYBT-LNX3230.00 230KV CKT Z	258.5	0.2036	100.2511	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT	
17G	16ALL	0	TO->FROM	G16_035	SULLYBT-LNX3230.00 - WHITLOK 230KV CKT 1	262.5	0.20715	103.0976	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z	
17G	16ALL	0	TO->FROM	G16_035	SULLYBT-LNX3230.00 - WHITLOK 230KV CKT 1	262.5	0.20715	102.7928	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT	
17G	16ALL	0	TO->FROM	G16_035	SULLYBT-LNX3230.00 - WHITLOK 230KV CKT 1	262.5	0.20715	102.45	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1	
17G	16ALL	0	TO->FROM	G16_035	SULLYBT-LNX3230.00 - WHITLOK 230KV CKT 1	262.5	0.20715	102.3738	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z	
17G	16ALL	0	TO->FROM	G16_035	SULLYBT-LNX3230.00 - WHITLOK 230KV CKT 1	262.5	0.20715	102.3738	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1	
20L	16ALL	0	TO->FROM	G16_035	SULLYBT-LNX3230.00 - WHITLOK 230KV CKT 1	262.2	0.99933	101.6893	BISMARCK - G16-035-TAP 230.00 230KV CKT 1	
17G	16ALL	2	TO->FROM	G16_035	SULLYBT-LNX3230.00 - WHITLOK 230KV CKT 1	262.9	0.20714	102.2181	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT	

10.8 H: FCITC Analysis Constraints Not Requiring Transmission Reinforcement

See next page.

Source Key

- G16_006 – GEN-2016-006
- G16_010A – GEN-2016-010 @ Viola
- G16_010B – GEN-2016-010 @ Harper
- G16_018 – GEN-2016-018
- G16_019 – GEN-2016-019
- G16_026A – GEN-2016-026 @ Callaway
- G16_026B – GEN-2016-026 @ Broken Bow
- G16_033 – GEN-2016-033
- G16_035 – GEN-2016-035
- G16_036 – GEN-2016-036

SEASON	GROUP	SCENARIO	DIRECTION	SOURCE	MONITORED ELEMENT	RATE		CONTINGENCY		CONTINGENCY
						(MVA)	TDF	LOADING %		
17SP	03ALL		4 TO->FROM	G16_010B	59TH ST - GILL ENERGY CENTER SOUTH 138KV CKT 1	209.9	0.12854	105.7001		BENTON - WICHITA 345KV CKT 1
17SP	03ALL		3 TO->FROM	G16_010B	59TH ST - GILL ENERGY CENTER SOUTH 138KV CKT 1	210	0.11833	103.1993		BENTON - WICHITA 345KV CKT 1
17SP	03ALL		2 TO->FROM	G16_010B	59TH ST - GILL ENERGY CENTER SOUTH 138KV CKT 1	210	0.1123	101.4575		BENTON - WICHITA 345KV CKT 1
17SP	16ALL		0 FROM->TO	G16_035	ABERDEEN JCT - ABERDEEN SIEBRECHT 115KV CKT 1	124.5	0.03471	149.9882		ELLEDALE - OAKES 230KV CKT 1
16WP	16ALL		0 FROM->TO	G16_035	ABERDEEN JCT - ABERDEEN SIEBRECHT 115KV CKT 1	125.1	0.0344	151.1982		ELLEDALE - OAKES 230KV CKT 1
17SP	16ALL		0 FROM->TO	G16_035	ABERDEEN JCT - ABERDEEN SIEBRECHT 115KV CKT 1	124.5	0.03431	142.9165		FORMAN - OAKES 230KV CKT 1
16WP	16ALL		0 FROM->TO	G16_035	ABERDEEN JCT - ABERDEEN SIEBRECHT 115KV CKT 1	125.1	0.034	144.0077		FORMAN - OAKES 230KV CKT 1
17G	16ALL		0 FROM->TO	G16_035	ABERDEEN JCT - ABERDEEN SIEBRECHT 115KV CKT 1	126.5	0.03373	169.8414		ELLEDALE - OAKES 230KV CKT 1
17G	16ALL		0 FROM->TO	G16_035	ABERDEEN JCT - ABERDEEN SIEBRECHT 115KV CKT 1	126.5	0.03332	162.6443		FORMAN - OAKES 230KV CKT 1
17SP	16ALL		0 TO->FROM	G16_035	ABERDEEN JCT - ELLENDALE 115KV CKT 1	128	0.03471	179.1682		ELLEDALE - OAKES 230KV CKT 1
16WP	16ALL		0 TO->FROM	G16_035	ABERDEEN JCT - ELLENDALE 115KV CKT 1	128	0.0344	174.0226		ELLEDALE - OAKES 230KV CKT 1
17SP	16ALL		0 TO->FROM	G16_035	ABERDEEN JCT - ELLENDALE 115KV CKT 1	128	0.03431	172.2899		FORMAN - OAKES 230KV CKT 1
16WP	16ALL		0 TO->FROM	G16_035	ABERDEEN JCT - ELLENDALE 115KV CKT 1	128	0.034	166.995		FORMAN - OAKES 230KV CKT 1
17G	16ALL		0 TO->FROM	G16_035	ABERDEEN JCT - ELLENDALE 115KV CKT 1	128	0.03373	182.3041		ELLEDALE - OAKES 230KV CKT 1
17G	16ALL		0 TO->FROM	G16_035	ABERDEEN JCT - ELLENDALE 115KV CKT 1	128	0.03332	175.1914		FORMAN - OAKES 230KV CKT 1
17SP	16ALL		2 FROM->TO	G16_035	ANTELOP-LNX3345.00 - BRDLAND-LNX3345.00 345KV CKT 1	524.9	0.11028	104.4271		G16-017-TAP 345.00 - G16035-TAPII345.00 345KV CKT 1
17SP	16ALL		2 FROM->TO	G16_035	ANTELOP-LNX3345.00 - BRDLAND-LNX3345.00 345KV CKT 1	524.9	0.11028	104.3509		FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z
17SP	16ALL		2 FROM->TO	G16_035	ANTELOP-LNX3345.00 - BRDLAND-LNX3345.00 345KV CKT 1	524.9	0.11028	104.3509		FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1
25SP	16ALL		2 FROM->TO	G16_035	ANTELOP-LNX3345.00 - BRDLAND-LNX3345.00 345KV CKT 1	524.3	0.10733	100.5785		G16-017-TAP 345.00 - G16035-TAPII345.00 345KV CKT 1
25SP	16ALL		2 FROM->TO	G16_035	ANTELOP-LNX3345.00 - BRDLAND-LNX3345.00 345KV CKT 1	524.3	0.10733	100.5213		FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1
25SP	16ALL		2 FROM->TO	G16_035	ANTELOP-LNX3345.00 - BRDLAND-LNX3345.00 345KV CKT 1	524.3	0.10733	100.5213		FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z
17SP	16ALL		2 FROM->TO	G16_035	ANTELOP-LNX3345.00 - BRDLAND-LNX3345.00 345KV CKT 1	524.9	0.09805	109.9317		GROTON - GROTON-LNX3 345.00 345KV CKT Z
17SP	16ALL		2 FROM->TO	G16_035	ANTELOP-LNX3345.00 - BRDLAND-LNX3345.00 345KV CKT 1	524.9	0.09805	109.9317		G16-044-TAP 345.00 - GROTON-LNX3 345.00 345KV CKT 1
25SP	16ALL		2 FROM->TO	G16_035	ANTELOP-LNX3345.00 - BRDLAND-LNX3345.00 345KV CKT 1	524.3	0.09523	106.0929		G16-044-TAP 345.00 - GROTON-LNX3 345.00 345KV CKT 1
25SP	16ALL		2 FROM->TO	G16_035	ANTELOP-LNX3345.00 - BRDLAND-LNX3345.00 345KV CKT 1	524.3	0.09523	106.0929		GROTON - GROTON-LNX3 345.00 345KV CKT Z
17G	16ALL		2 FROM->TO	G16_035	ANTELOP-LNX3345.00 - BRDLAND-LNX3345.00 345KV CKT 1	524.1	0.09501	104.505		GROTON - GROTON-LNX3 345.00 345KV CKT Z
17G	16ALL		2 FROM->TO	G16_035	ANTELOP-LNX3345.00 - BRDLAND-LNX3345.00 345KV CKT 1	524.1	0.09501	104.505		G16-044-TAP 345.00 - GROTON-LNX3 345.00 345KV CKT 1
20SP	16ALL		2 FROM->TO	G16_035	ANTELOP-LNX3345.00 - BRDLAND-LNX3345.00 345KV CKT 1	524	0.09481	104.3105		G16-044-TAP 345.00 - GROTON-LNX3 345.00 345KV CKT 1
20SP	16ALL		2 FROM->TO	G16_035	ANTELOP-LNX3345.00 - BRDLAND-LNX3345.00 345KV CKT 1	524	0.09481	104.3105		GROTON - GROTON-LNX3 345.00 345KV CKT Z
17SP	16ALL		0 FROM->TO	G16_035	ANTELOP-LNX3345.00 - BRDLAND-LNX3345.00 345KV CKT 1	524.9	0.09449	106.8985		P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT
17SP	16ALL		0 FROM->TO	G16_035	ANTELOP-LNX3345.00 - BRDLAND-LNX3345.00 345KV CKT 1	524.9	0.09449	107.0318		LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
17SP	16ALL		0 FROM->TO	G16_035	ANTELOP-LNX3345.00 - BRDLAND-LNX3345.00 345KV CKT 1	524.9	0.09449	106.3841		G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
17SP	16ALL		0 FROM->TO	G16_035	ANTELOP-LNX3345.00 - BRDLAND-LNX3345.00 345KV CKT 1	524.9	0.09449	106.3079		FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z
17SP	16ALL		0 FROM->TO	G16_035	ANTELOP-LNX3345.00 - BRDLAND-LNX3345.00 345KV CKT 1	524.9	0.09449	106.3079		FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1
17SP	16ALL		2 FROM->TO	G16_035	ANTELOP-LNX3345.00 - BRDLAND-LNX3345.00 345KV CKT 1	524.9	0.09448	106.5555		P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT
25SP	16ALL		0 FROM->TO	G16_035	ANTELOP-LNX3345.00 - BRDLAND-LNX3345.00 345KV CKT 1	524.3	0.09166	102.8964		P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT
25SP	16ALL		2 FROM->TO	G16_035	ANTELOP-LNX3345.00 - BRDLAND-LNX3345.00 345KV CKT 1	524.3	0.09166	102.534		P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT
25SP	16ALL		0 FROM->TO	G16_035	ANTELOP-LNX3345.00 - BRDLAND-LNX3345.00 345KV CKT 1	524.3	0.09166	103.0108		LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
25SP	16ALL		0 FROM->TO	G16_035	ANTELOP-LNX3345.00 - BRDLAND-LNX3345.00 345KV CKT 1	524.3	0.09166	102.4577		G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
25SP	16ALL		0 FROM->TO	G16_035	ANTELOP-LNX3345.00 - BRDLAND-LNX3345.00 345KV CKT 1	524.3	0.09166	102.4005		FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z
25SP	16ALL		0 FROM->TO	G16_035	ANTELOP-LNX3345.00 - BRDLAND-LNX3345.00 345KV CKT 1	524.3	0.09166	102.4005		FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1
17G	16ALL		0 FROM->TO	G16_035	ANTELOP-LNX3345.00 - BRDLAND-LNX3345.00 345KV CKT 1	524.1	0.09127	100.4442		P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT
17G	16ALL		2 FROM->TO	G16_035	ANTELOP-LNX3345.00 - BRDLAND-LNX3345.00 345KV CKT 1	524.1	0.09127	100.1199		P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT
17G	16ALL		0 FROM->TO	G16_035	ANTELOP-LNX3345.00 - BRDLAND-LNX3345.00 345KV CKT 1	524.1	0.09127	100.5587		LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
17G	16ALL		0 FROM->TO	G16_035	ANTELOP-LNX3345.00 - BRDLAND-LNX3345.00 345KV CKT 1	524.1	0.09127	100.0245		G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
20SP	16ALL		0 FROM->TO	G16_035	ANTELOP-LNX3345.00 - BRDLAND-LNX3345.00 345KV CKT 1	524	0.09125	101.1122		P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT
20SP	16ALL		2 FROM->TO	G16_035	ANTELOP-LNX3345.00 - BRDLAND-LNX3345.00 345KV CKT 1	524	0.09125	100.7496		P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT
20SP	16ALL		0 FROM->TO	G16_035	ANTELOP-LNX3345.00 - BRDLAND-LNX3345.00 345KV CKT 1	524	0.09125	101.2267		LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
20SP	16ALL		0 FROM->TO	G16_035	ANTELOP-LNX3345.00 - BRDLAND-LNX3345.00 345KV CKT 1	524	0.09125	100.7114		G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
20SP	16ALL		0 FROM->TO	G16_035	ANTELOP-LNX3345.00 - BRDLAND-LNX3345.00 345KV CKT 1	524	0.09125	100.6351		FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1
20SP	16ALL		0 FROM->TO	G16_035	ANTELOP-LNX3345.00 - BRDLAND-LNX3345.00 345KV CKT 1	524	0.09125	100.6351		FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z
17SP	16ALL		0 FROM->TO	G16_035	ANTELOP-LNX3345.00 - BRDLAND-LNX3345.00 345KV CKT 1	524.9	0.08912	110.2196		G16-044-TAP 345.00 - GROTON-LNX3 345.00 345KV CKT 1
17SP	16ALL		0 FROM->TO	G16_035	ANTELOP-LNX3345.00 - BRDLAND-LNX3345.00 345KV CKT 1	524.9	0.08912	110.2196		GROTON - GROTON-LNX3 345.00 345KV CKT Z
25SP	16ALL		0 FROM->TO	G16_035	ANTELOP-LNX3345.00 - BRDLAND-LNX3345.00 345KV CKT 1	524.3	0.08615	106.3447		G16-044-TAP 345.00 - GROTON-LNX3 345.00 345KV CKT 1
25SP	16ALL		0 FROM->TO	G16_035	ANTELOP-LNX3345.00 - BRDLAND-LNX3345.00 345KV CKT 1	524.3	0.08615	106.3447		GROTON - GROTON-LNX3 345.00 345KV CKT Z

SEASON	GROUP	SCENARIO	DIRECTION	SOURCE	MONITORED ELEMENT	RATE		CONTINGENCY		CONTINGENCY
						(MVA)	TDF	LOADING %		
17G	16ALL	0	FROM->TO	G16_035	ANTELOP-LNX3345.00 - BRDLAND-LNX3345.00 345KV CKT 1	524.1	0.08609	104.6216	G16-044-TAP 345.00 - GROTON-LNX3 345.00 345KV CKT 1	
17G	16ALL	0	FROM->TO	G16_035	ANTELOP-LNX3345.00 - BRDLAND-LNX3345.00 345KV CKT 1	524.1	0.08609	104.6216	GROTON - GROTON-LNX3 345.00 345KV CKT Z	
20SP	16ALL	0	FROM->TO	G16_035	ANTELOP-LNX3345.00 - BRDLAND-LNX3345.00 345KV CKT 1	524	0.08573	104.5624	GROTON - GROTON-LNX3 345.00 345KV CKT Z	
20SP	16ALL	0	FROM->TO	G16_035	ANTELOP-LNX3345.00 - BRDLAND-LNX3345.00 345KV CKT 1	524	0.08573	104.5624	G16-044-TAP 345.00 - GROTON-LNX3 345.00 345KV CKT 1	
17SP	16ALL	2	FROM->TO	G16_035	ANTELOP-LNX3345.00 - BRDLAND-LNX3345.00 345KV CKT 1	524.9	0.08487	101.7565	RIEL - ROSEAU 500KV CKT 1	
17SP	16ALL	2	FROM->TO	G16_035	ANTELOP-LNX3345.00 - BRDLAND-LNX3345.00 345KV CKT 1	524.9	0.08487	101.3945	ROSEAU - ROSEAU 2 500.00 500KV CKT 1	
17SP	16ALL	2	FROM->TO	G16_035	ANTELOP-LNX3345.00 - BRDLAND-LNX3345.00 345KV CKT 1	524.9	0.08487	101.3945	ROSEAU - ROSEAU 2 500.00 500KV CKT 1	
17SP	16ALL	2	FROM->TO	G16_035	ANTELOP-LNX3345.00 - BRDLAND-LNX3345.00 345KV CKT 1	524.9	0.08487	101.0135	FORBES - ROSEAU 500KV CKT 1	
17SP	16ALL	0	FROM->TO	G16_035	ANTELOP-LNX3345.00 - BRDLAND-LNX3345.00 345KV CKT 1	524.9	0.07825	101.6272	RIEL - ROSEAU 500KV CKT 1	
17SP	16ALL	0	FROM->TO	G16_035	ANTELOP-LNX3345.00 - BRDLAND-LNX3345.00 345KV CKT 1	524.9	0.07825	101.2653	ROSEAU - ROSEAU 2 500.00 500KV CKT 1	
17SP	16ALL	0	FROM->TO	G16_035	ANTELOP-LNX3345.00 - BRDLAND-LNX3345.00 345KV CKT 1	524.9	0.07825	101.2653	ROSEAU - ROSEAU 2 500.00 500KV CKT 1	
17SP	16ALL	0	FROM->TO	G16_035	ANTELOP-LNX3345.00 - BRDLAND-LNX3345.00 345KV CKT 1	524.9	0.07825	100.8842	FORBES - ROSEAU 500KV CKT 1	
17SP	03ALL	2	TO->FROM	G16_010B	BENTON - WICHITA 345KV CKT 1	952.9	0.11405	102.7004	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	
17SP	03ALL	3	TO->FROM	G16_010B	BENTON - WICHITA 345KV CKT 1	952.9	0.10847	102.3823	P12:230-MKEC:CONCORDIA-ELMCREEK:..	
17SP	03ALL	4	TO->FROM	G16_010B	BENTON - WICHITA 345KV CKT 1	952.9	0.09902	101.9152	BEACH STATION - G10-48T 115.00 115KV CKT 1	
17SP	03ALL	0	TO->FROM	G16_010B	BENTON - WICHITA 345KV CKT 1	953.1	0.07912	105.1326	SMOKYH6 230.00 - SUMMIT 230KV CKT 1	
17SP	03ALL	0	TO->FROM	G16_010B	BENTON - WICHITA 345KV CKT 1	953.1	0.07912	100.8518	WOLF CREEK 345/25.0KV TRANSFORMER CKT 1	
17SP	16ALL	0	FROM->TO	G16_035	BIG STONE - BLAIR 230KV CKT 1	523.8	0.0382	108.2182	BIG STONE (230/115) 230/115/13.8KV TRANSFORMER CKT 1	
17SP	16ALL	2	FROM->TO	G16_035	BIG STONE - BLAIR 230KV CKT 1	523.8	0.03335	108.1223	BIG STONE (230/115) 230/115/13.8KV TRANSFORMER CKT 1	
17SP	16ALL	2	TO->FROM	G16_035	BISON - HETINGER 230KV CKT 1	233.9	0.05802	118.7858	G16-017-TAP 345.00 - G16035-TAPII345.00 345KV CKT 1	
17SP	16ALL	2	TO->FROM	G16_035	BISON - HETINGER 230KV CKT 1	233.9	0.05802	118.7003	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z	
17SP	16ALL	2	TO->FROM	G16_035	BISON - HETINGER 230KV CKT 1	233.9	0.05802	118.7003	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1	
25SP	16ALL	2	TO->FROM	G16_035	BISON - HETINGER 230KV CKT 1	233.9	0.0547	115.1065	G16-017-TAP 345.00 - G16035-TAPII345.00 345KV CKT 1	
25SP	16ALL	2	TO->FROM	G16_035	BISON - HETINGER 230KV CKT 1	233.9	0.0547	115.021	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1	
25SP	16ALL	2	TO->FROM	G16_035	BISON - HETINGER 230KV CKT 1	233.9	0.0547	115.021	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z	
20SP	16ALL	2	TO->FROM	G16_035	BISON - HETINGER 230KV CKT 1	234.2	0.05457	111.3539	G16-017-TAP 345.00 - G16035-TAPII345.00 345KV CKT 1	
20SP	16ALL	2	TO->FROM	G16_035	BISON - HETINGER 230KV CKT 1	234.2	0.05457	111.3112	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1	
20SP	16ALL	2	TO->FROM	G16_035	BISON - HETINGER 230KV CKT 1	234.2	0.05457	111.3112	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z	
17SP	16ALL	0	TO->FROM	G16_035	BISON - HETINGER 230KV CKT 1	234	0.05327	120.5128	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT	
17SP	16ALL	2	TO->FROM	G16_035	BISON - HETINGER 230KV CKT 1	233.9	0.05327	120.2223	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT	
17SP	16ALL	0	TO->FROM	G16_035	BISON - HETINGER 230KV CKT 1	234	0.05327	120.641	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z	
17SP	16ALL	0	TO->FROM	G16_035	BISON - HETINGER 230KV CKT 1	234	0.05327	120	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1	
17SP	16ALL	0	TO->FROM	G16_035	BISON - HETINGER 230KV CKT 1	234	0.05327	119.9573	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1	
17SP	16ALL	0	TO->FROM	G16_035	BISON - HETINGER 230KV CKT 1	234	0.05327	119.9573	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z	
17SP	16ALL	2	TO->FROM	G16_035	BISON - HETINGER 230KV CKT 1	233.9	0.05108	116.2467	P12:345:UMZB:# 103 #: BD IN SD. LOSS OF LINE	
17SP	16ALL	2	TO->FROM	G16_035	BISON - HETINGER 230KV CKT 1	233.9	0.05108	116.2467	P12:345:UMZB:# 102 #: AVS BD IN ND. AVS BRD LR	
17SP	16ALL	2	TO->FROM	G16_035	BISON - HETINGER 230KV CKT 1	233.9	0.05108	115.9046	P13:345:UMZB:# 244 #: BD IN SD. LOSS OF TX	
17SP	16ALL	2	TO->FROM	G16_035	BISON - HETINGER 230KV CKT 1	233.9	0.05108	116.2467	ANTELOP-LNX3345.00 - ANTELOPE VALLEY 345KV CKT Z	
17SP	16ALL	2	TO->FROM	G16_035	BISON - HETINGER 230KV CKT 1	233.9	0.05108	115.9046	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	
17SP	16ALL	2	TO->FROM	G16_035	BISON - HETINGER 230KV CKT 1	233.9	0.05108	115.9046	ANTELOP-LNX3345.00 - BRDLAND-LNX3345.00 345KV CKT 1	
17SP	16ALL	2	TO->FROM	G16_035	BISON - HETINGER 230KV CKT 1	233.9	0.05108	115.9046	BRDLAND-LNX3345.00 - HURON 345KV CKT Z	
17SP	16ALL	2	TO->FROM	G16_035	BISON - HETINGER 230KV CKT 1	233.9	0.05108	115.8619	BROADLAND - HURON 230KV CKT 1	
17SP	16ALL	0	TO->FROM	G16_035	BISON - HETINGER 230KV CKT 1	234	0.0501	116.241	P12:345:UMZB:# 103 #: BD IN SD. LOSS OF LINE	
17SP	16ALL	0	TO->FROM	G16_035	BISON - HETINGER 230KV CKT 1	234	0.0501	116.241	P12:345:UMZB:# 102 #: AVS BD IN ND. AVS BRD LR	
17SP	16ALL	0	TO->FROM	G16_035	BISON - HETINGER 230KV CKT 1	234	0.0501	115.8991	P13:345:UMZB:# 244 #: BD IN SD. LOSS OF TX	
17SP	16ALL	0	TO->FROM	G16_035	BISON - HETINGER 230KV CKT 1	234	0.0501	116.241	ANTELOP-LNX3345.00 - ANTELOPE VALLEY 345KV CKT Z	
17SP	16ALL	0	TO->FROM	G16_035	BISON - HETINGER 230KV CKT 1	234	0.0501	115.8991	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	
17SP	16ALL	0	TO->FROM	G16_035	BISON - HETINGER 230KV CKT 1	234	0.0501	115.8991	ANTELOP-LNX3345.00 - BRDLAND-LNX3345.00 345KV CKT 1	
17SP	16ALL	0	TO->FROM	G16_035	BISON - HETINGER 230KV CKT 1	234	0.0501	115.8991	BRDLAND-LNX3345.00 - HURON 345KV CKT Z	
17SP	16ALL	0	TO->FROM	G16_035	BISON - HETINGER 230KV CKT 1	234	0.0501	115.8564	BROADLAND - HURON 230KV CKT 1	
25SP	16ALL	0	TO->FROM	G16_035	BISON - HETINGER 230KV CKT 1	233.9	0.04985	116.8072	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT	
25SP	16ALL	2	TO->FROM	G16_035	BISON - HETINGER 230KV CKT 1	233.9	0.04985	116.4651	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT	
25SP	16ALL	0	TO->FROM	G16_035	BISON - HETINGER 230KV CKT 1	233.9	0.04985	116.9781	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z	
25SP	16ALL	0	TO->FROM	G16_035	BISON - HETINGER 230KV CKT 1	233.9	0.04985	116.4224	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1	
25SP	16ALL	0	TO->FROM	G16_035	BISON - HETINGER 230KV CKT 1	233.9	0.04985	116.3368	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1	

SEASON	GROUP	SCENARIO	DIRECTION	SOURCE	MONITORED ELEMENT	RATE		CONTINGENCY		CONTINGENCY
						(MVA)	TDF	LOADING %		
25SP	16ALL	0	TO->FROM	G16_035	BISON - HETINGER 230KV CKT 1	233.9	0.04985	116.3368	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z	
20SP	16ALL	0	TO->FROM	G16_035	BISON - HETINGER 230KV CKT 1	234.2	0.04976	113.0486	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT	
20SP	16ALL	0	TO->FROM	G16_035	BISON - HETINGER 230KV CKT 1	234.2	0.04976	113.1767	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z	
20SP	16ALL	0	TO->FROM	G16_035	BISON - HETINGER 230KV CKT 1	234.2	0.04976	112.6643	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1	
20SP	16ALL	0	TO->FROM	G16_035	BISON - HETINGER 230KV CKT 1	234.2	0.04976	112.6216	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z	
20SP	16ALL	0	TO->FROM	G16_035	BISON - HETINGER 230KV CKT 1	234.2	0.04976	112.6216	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1	
20SP	16ALL	2	TO->FROM	G16_035	BISON - HETINGER 230KV CKT 1	234.2	0.04975	112.707	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT	
25SP	16ALL	2	TO->FROM	G16_035	BISON - HETINGER 230KV CKT 1	233.9	0.04771	112.5833	P12:345:UMZB:# 102 #: AVS BD IN ND. AVS BRD LR	
25SP	16ALL	2	TO->FROM	G16_035	BISON - HETINGER 230KV CKT 1	233.9	0.04771	112.5833	P12:345:UMZB:# 103 #: BD IN SD. LOSS OF LINE	
25SP	16ALL	2	TO->FROM	G16_035	BISON - HETINGER 230KV CKT 1	233.9	0.04771	112.3267	P13:345:UMZB:# 244 #: BD IN SD. LOSS OF TX	
25SP	16ALL	2	TO->FROM	G16_035	BISON - HETINGER 230KV CKT 1	233.9	0.04771	112.626	ANTELOP-LNX3345.00 - ANTELOPE VALLEY 345KV CKT Z	
25SP	16ALL	2	TO->FROM	G16_035	BISON - HETINGER 230KV CKT 1	233.9	0.04771	112.3267	BRDLAND-LNX3345.00 - HURON 345KV CKT Z	
25SP	16ALL	2	TO->FROM	G16_035	BISON - HETINGER 230KV CKT 1	233.9	0.04771	112.3267	ANTELOP-LNX3345.00 - BRDLAND-LNX3345.00 345KV CKT 1	
25SP	16ALL	2	TO->FROM	G16_035	BISON - HETINGER 230KV CKT 1	233.9	0.04771	112.3267	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	
25SP	16ALL	2	TO->FROM	G16_035	BISON - HETINGER 230KV CKT 1	233.9	0.04771	112.284	BROADLAND - HURON 230KV CKT 1	
20SP	16ALL	2	TO->FROM	G16_035	BISON - HETINGER 230KV CKT 1	234.2	0.04762	108.927	P12:345:UMZB:# 102 #: AVS BD IN ND. AVS BRD LR	
20SP	16ALL	2	TO->FROM	G16_035	BISON - HETINGER 230KV CKT 1	234.2	0.04762	108.927	P12:345:UMZB:# 103 #: BD IN SD. LOSS OF LINE	
20SP	16ALL	2	TO->FROM	G16_035	BISON - HETINGER 230KV CKT 1	234.2	0.04762	108.6708	P13:345:UMZB:# 244 #: BD IN SD. LOSS OF TX	
20SP	16ALL	2	TO->FROM	G16_035	BISON - HETINGER 230KV CKT 1	234.2	0.04762	108.927	ANTELOP-LNX3345.00 - ANTELOPE VALLEY 345KV CKT Z	
20SP	16ALL	2	TO->FROM	G16_035	BISON - HETINGER 230KV CKT 1	234.2	0.04762	108.6708	ANTELOP-LNX3345.00 - BRDLAND-LNX3345.00 345KV CKT 1	
20SP	16ALL	2	TO->FROM	G16_035	BISON - HETINGER 230KV CKT 1	234.2	0.04762	108.6708	BRDLAND-LNX3345.00 - HURON 345KV CKT Z	
20SP	16ALL	2	TO->FROM	G16_035	BISON - HETINGER 230KV CKT 1	234.2	0.04762	108.6708	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	
20SP	16ALL	2	TO->FROM	G16_035	BISON - HETINGER 230KV CKT 1	234.2	0.04762	108.6281	BROADLAND - HURON 230KV CKT 1	
17SP	16ALL	2	TO->FROM	G16_035	BISON - HETINGER 230KV CKT 1	233.9	0.04704	117.9119	RIEL - ROSEAU 500KV CKT 1	
17SP	16ALL	2	TO->FROM	G16_035	BISON - HETINGER 230KV CKT 1	233.9	0.04704	117.5271	ROSEAU - ROSEAU 2 500.00 500KV CKT 1	
17SP	16ALL	2	TO->FROM	G16_035	BISON - HETINGER 230KV CKT 1	233.9	0.04704	117.5271	ROSEAU - ROSEAU 2 500.00 500KV CKT 1	
17SP	16ALL	2	TO->FROM	G16_035	BISON - HETINGER 230KV CKT 1	233.9	0.04704	117.0996	FORBES - ROSEAU 500KV CKT 1	
17SP	16ALL	0	TO->FROM	G16_035	BISON - HETINGER 230KV CKT 1	234	0.04668	117.8736	RIEL - ROSEAU 500KV CKT 1	
17SP	16ALL	0	TO->FROM	G16_035	BISON - HETINGER 230KV CKT 1	234	0.04668	117.489	ROSEAU - ROSEAU 2 500.00 500KV CKT 1	
17SP	16ALL	0	TO->FROM	G16_035	BISON - HETINGER 230KV CKT 1	234	0.04668	117.489	ROSEAU - ROSEAU 2 500.00 500KV CKT 1	
17SP	16ALL	0	TO->FROM	G16_035	BISON - HETINGER 230KV CKT 1	234	0.04668	117.0617	FORBES - ROSEAU 500KV CKT 1	
25SP	16ALL	0	TO->FROM	G16_035	BISON - HETINGER 230KV CKT 1	233.9	0.0466	112.6624	P12:345:UMZB:# 102 #: AVS BD IN ND. AVS BRD LR	
25SP	16ALL	0	TO->FROM	G16_035	BISON - HETINGER 230KV CKT 1	233.9	0.0466	112.6624	P12:345:UMZB:# 103 #: BD IN SD. LOSS OF LINE	
25SP	16ALL	0	TO->FROM	G16_035	BISON - HETINGER 230KV CKT 1	233.9	0.0466	112.4059	P13:345:UMZB:# 244 #: BD IN SD. LOSS OF TX	
25SP	16ALL	0	TO->FROM	G16_035	BISON - HETINGER 230KV CKT 1	233.9	0.0466	112.6624	ANTELOP-LNX3345.00 - ANTELOPE VALLEY 345KV CKT Z	
25SP	16ALL	0	TO->FROM	G16_035	BISON - HETINGER 230KV CKT 1	233.9	0.0466	112.4059	ANTELOP-LNX3345.00 - BRDLAND-LNX3345.00 345KV CKT 1	
25SP	16ALL	0	TO->FROM	G16_035	BISON - HETINGER 230KV CKT 1	233.9	0.0466	112.4059	BRDLAND-LNX3345.00 - HURON 345KV CKT Z	
25SP	16ALL	0	TO->FROM	G16_035	BISON - HETINGER 230KV CKT 1	233.9	0.0466	112.4059	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	
25SP	16ALL	0	TO->FROM	G16_035	BISON - HETINGER 230KV CKT 1	233.9	0.0466	112.3632	BROADLAND - HURON 230KV CKT 1	
20SP	16ALL	0	TO->FROM	G16_035	BISON - HETINGER 230KV CKT 1	234.2	0.04652	109.0061	P12:345:UMZB:# 102 #: AVS BD IN ND. AVS BRD LR	
20SP	16ALL	0	TO->FROM	G16_035	BISON - HETINGER 230KV CKT 1	234.2	0.04652	109.0061	P12:345:UMZB:# 103 #: BD IN SD. LOSS OF LINE	
20SP	16ALL	0	TO->FROM	G16_035	BISON - HETINGER 230KV CKT 1	234.2	0.04652	108.7499	P13:345:UMZB:# 244 #: BD IN SD. LOSS OF TX	
20SP	16ALL	0	TO->FROM	G16_035	BISON - HETINGER 230KV CKT 1	234.2	0.04652	109.0061	ANTELOP-LNX3345.00 - ANTELOPE VALLEY 345KV CKT Z	
20SP	16ALL	0	TO->FROM	G16_035	BISON - HETINGER 230KV CKT 1	234.2	0.04652	108.7499	BRDLAND-LNX3345.00 - HURON 345KV CKT Z	
20SP	16ALL	0	TO->FROM	G16_035	BISON - HETINGER 230KV CKT 1	234.2	0.04652	108.7499	ANTELOP-LNX3345.00 - BRDLAND-LNX3345.00 345KV CKT 1	
20SP	16ALL	0	TO->FROM	G16_035	BISON - HETINGER 230KV CKT 1	234.2	0.04652	108.7499	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	
20SP	16ALL	0	TO->FROM	G16_035	BISON - HETINGER 230KV CKT 1	234.2	0.04652	108.7072	BROADLAND - HURON 230KV CKT 1	
17SP	16ALL	2	TO->FROM	G16_035	BISON - HETINGER 230KV CKT 1	233.9	0.04477	113.9325	P12:345:UMZW:# 1747 #: WT2 IN SD. WT2-WHT LINE FAULT	
17SP	16ALL	2	TO->FROM	G16_035	BISON - HETINGER 230KV CKT 1	233.9	0.04477	114.6205	LARAMIE RIVER 345/24.0KV TRANSFORMER CKT 1	
17SP	16ALL	2	TO->FROM	G16_035	BISON - HETINGER 230KV CKT 1	233.9	0.04474	112.6384	P12:230:UMZB:# 112 #: NU IN SD. NU-RCDC & DRY CREEK XFMR	
17SP	16ALL	0	TO->FROM	G16_035	BISON - HETINGER 230KV CKT 1	234	0.04431	113.931	BROADLAND - HURON 230KV CKT 1	
17SP	16ALL	0	TO->FROM	G16_035	BISON - HETINGER 230KV CKT 1	234	0.04431	114.5722	LARAMIE RIVER 345/24.0KV TRANSFORMER CKT 1	
25SP	16ALL	2	TO->FROM	G16_035	BISON - HETINGER 230KV CKT 1	233.9	0.04364	113.0865	RIEL - ROSEAU 500KV CKT 1	
25SP	16ALL	2	TO->FROM	G16_035	BISON - HETINGER 230KV CKT 1	233.9	0.04364	112.7445	ROSEAU - ROSEAU 2 500.00 500KV CKT 1	
25SP	16ALL	2	TO->FROM	G16_035	BISON - HETINGER 230KV CKT 1	233.9	0.04364	112.7445	ROSEAU - ROSEAU 2 500.00 500KV CKT 1	

SEASON	GROUP	SCENARIO	DIRECTION	SOURCE	MONITORED ELEMENT	RATE		CONTINGENCY		CONTINGENCY
						(MVA)	TDF	LOADING %		
25SP	16ALL	2	TO->FROM	G16_035	BISON - HETINGER 230KV CKT 1	233.9	0.04364	112.4025	FORBES - ROSEAU 500KV CKT 1	
20SP	16ALL	2	TO->FROM	G16_035	BISON - HETINGER 230KV CKT 1	234.2	0.04361	110.3492	RIEL - ROSEAU 500KV CKT 1	
20SP	16ALL	2	TO->FROM	G16_035	BISON - HETINGER 230KV CKT 1	234.2	0.04361	109.9649	ROSEAU - ROSEAUM 2 500.00 500KV CKT 1	
20SP	16ALL	2	TO->FROM	G16_035	BISON - HETINGER 230KV CKT 1	234.2	0.04361	109.9649	ROSEAU - ROSEAUM 2 500.00 500KV CKT 1	
20SP	16ALL	2	TO->FROM	G16_035	BISON - HETINGER 230KV CKT 1	234.2	0.04361	109.5806	FORBES - ROSEAU 500KV CKT 1	
25SP	16ALL	0	TO->FROM	G16_035	BISON - HETINGER 230KV CKT 1	233.9	0.04314	113.13	RIEL - ROSEAU 500KV CKT 1	
25SP	16ALL	0	TO->FROM	G16_035	BISON - HETINGER 230KV CKT 1	233.9	0.04314	112.7879	ROSEAU - ROSEAUM 2 500.00 500KV CKT 1	
25SP	16ALL	0	TO->FROM	G16_035	BISON - HETINGER 230KV CKT 1	233.9	0.04314	112.7879	ROSEAU - ROSEAUM 2 500.00 500KV CKT 1	
25SP	16ALL	0	TO->FROM	G16_035	BISON - HETINGER 230KV CKT 1	233.9	0.04314	112.4031	FORBES - ROSEAU 500KV CKT 1	
20SP	16ALL	0	TO->FROM	G16_035	BISON - HETINGER 230KV CKT 1	234.2	0.04312	110.3925	RIEL - ROSEAU 500KV CKT 1	
20SP	16ALL	0	TO->FROM	G16_035	BISON - HETINGER 230KV CKT 1	234.2	0.04312	110.0083	ROSEAU - ROSEAUM 2 500.00 500KV CKT 1	
20SP	16ALL	0	TO->FROM	G16_035	BISON - HETINGER 230KV CKT 1	234.2	0.04312	110.0083	ROSEAU - ROSEAUM 2 500.00 500KV CKT 1	
20SP	16ALL	0	TO->FROM	G16_035	BISON - HETINGER 230KV CKT 1	234.2	0.04312	109.6667	FORBES - ROSEAU 500KV CKT 1	
25SP	16ALL	2	TO->FROM	G16_035	BISON - HETINGER 230KV CKT 1	233.9	0.04161	109.6967	G16-017-TAP 345.00 - G16035-TAPII345.00 345KV CKT 1	
25SP	16ALL	2	TO->FROM	G16_035	BISON - HETINGER 230KV CKT 1	233.9	0.04161	110.3062	LARAMIE RIVER 345/24.0KV TRANSFORMER CKT 1	
25SP	16ALL	2	TO->FROM	G16_035	BISON - HETINGER 230KV CKT 1	233.9	0.04158	109.5997	P12:230:UMZB:# 112 #: NU IN SD. NU-RCDC & DRY CREEK XFMR	
20SP	16ALL	2	TO->FROM	G16_035	BISON - HETINGER 230KV CKT 1	234.2	0.04157	106.4048	RIEL - ROSEAU 500KV CKT 1	
20SP	16ALL	2	TO->FROM	G16_035	BISON - HETINGER 230KV CKT 1	234.2	0.04157	107.0447	LARAMIE RIVER 345/24.0KV TRANSFORMER CKT 1	
20SP	16ALL	2	TO->FROM	G16_035	BISON - HETINGER 230KV CKT 1	234.2	0.04154	106.3933	P12:230:UMZB:# 112 #: NU IN SD. NU-RCDC & DRY CREEK XFMR	
25SP	16ALL	0	TO->FROM	G16_035	BISON - HETINGER 230KV CKT 1	233.9	0.04102	109.7324	System Intact	
25SP	16ALL	0	TO->FROM	G16_035	BISON - HETINGER 230KV CKT 1	233.9	0.04102	110.342	LARAMIE RIVER 345/24.0KV TRANSFORMER CKT 1	
20SP	16ALL	0	TO->FROM	G16_035	BISON - HETINGER 230KV CKT 1	234.2	0.041	106.4832	RIEL - ROSEAU 500KV CKT 1	
20SP	16ALL	0	TO->FROM	G16_035	BISON - HETINGER 230KV CKT 1	234.2	0.041	107.1231	LARAMIE RIVER 345/24.0KV TRANSFORMER CKT 1	
17SP	16ALL	2	TO->FROM	G16_035	BISON - HETINGER 230KV CKT 1	233.9	0.03694	125.0211	BELFIELD - DAGLUM 4230.00 230KV CKT 1	
17SP	16ALL	0	TO->FROM	G16_035	BISON - HETINGER 230KV CKT 1	234	0.03665	124.9836	BELFIELD - DAGLUM 4230.00 230KV CKT 1	
25SP	16ALL	2	TO->FROM	G16_035	BISON - HETINGER 230KV CKT 1	233.9	0.03425	118.5945	BELFIELD - DAGLUM 4230.00 230KV CKT 1	
20SP	16ALL	2	TO->FROM	G16_035	BISON - HETINGER 230KV CKT 1	234.2	0.03423	116.6264	BELFIELD - DAGLUM 4230.00 230KV CKT 1	
25SP	16ALL	0	TO->FROM	G16_035	BISON - HETINGER 230KV CKT 1	233.9	0.03386	118.6456	BELFIELD - DAGLUM 4230.00 230KV CKT 1	
20SP	16ALL	0	TO->FROM	G16_035	BISON - HETINGER 230KV CKT 1	234.2	0.03385	116.6774	BELFIELD - DAGLUM 4230.00 230KV CKT 1	
17SP	16ALL	2	FROM->TO	G16_035	BLAIR - GRANITE FALLS 230KV CKT 1	408.6	0.04419	108.8057	P12:345:UMZW:# 1747 #: WT2 IN SD. WT2-WHT LINE FAULT	
17SP	16ALL	2	FROM->TO	G16_035	BLAIR - GRANITE FALLS 230KV CKT 1	408.6	0.04419	108.8057	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	
17SP	16ALL	2	FROM->TO	G16_035	BLAIR - GRANITE FALLS 230KV CKT 1	408.6	0.04419	108.8057	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	
17SP	16ALL	0	FROM->TO	G16_035	BLAIR - GRANITE FALLS 230KV CKT 1	408.6	0.04277	108.8091	P12:345:UMZW:# 1747 #: WT2 IN SD. WT2-WHT LINE FAULT	
17SP	16ALL	0	FROM->TO	G16_035	BLAIR - GRANITE FALLS 230KV CKT 1	408.6	0.04277	108.8091	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	
17SP	16ALL	0	FROM->TO	G16_035	BLAIR - GRANITE FALLS 230KV CKT 1	408.6	0.04277	108.8091	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	
17SP	16ALL	2	FROM->TO	G16_035	BROADLAND - HURON 230KV CKT 1	465.9	0.11028	117.4367	G16-017-TAP 345.00 - G16035-TAPII345.00 345KV CKT 1	
17SP	16ALL	2	FROM->TO	G16_035	BROADLAND - HURON 230KV CKT 1	465.9	0.11028	117.3509	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z	
17SP	16ALL	2	FROM->TO	G16_035	BROADLAND - HURON 230KV CKT 1	465.9	0.11028	117.3509	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1	
16WP	16ALL	2	FROM->TO	G16_035	BROADLAND - HURON 230KV CKT 1	473.4	0.10892	101.0202	G16-017-TAP 345.00 - G16035-TAPII345.00 345KV CKT 1	
16WP	16ALL	2	FROM->TO	G16_035	BROADLAND - HURON 230KV CKT 1	473.4	0.10892	100.9779	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1	
16WP	16ALL	2	FROM->TO	G16_035	BROADLAND - HURON 230KV CKT 1	473.4	0.10892	100.9779	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z	
25SP	16ALL	2	FROM->TO	G16_035	BROADLAND - HURON 230KV CKT 1	468.2	0.10733	112.4376	G16-017-TAP 345.00 - G16035-TAPII345.00 345KV CKT 1	
25SP	16ALL	2	FROM->TO	G16_035	BROADLAND - HURON 230KV CKT 1	468.2	0.10733	112.3735	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1	
25SP	16ALL	2	FROM->TO	G16_035	BROADLAND - HURON 230KV CKT 1	468.2	0.10733	112.3735	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z	
17G	16ALL	2	FROM->TO	G16_035	BROADLAND - HURON 230KV CKT 1	469.1	0.10712	109.9146	G16-017-TAP 345.00 - G16035-TAPII345.00 345KV CKT 1	
17G	16ALL	2	FROM->TO	G16_035	BROADLAND - HURON 230KV CKT 1	469.1	0.10712	109.8507	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1	
17G	16ALL	2	FROM->TO	G16_035	BROADLAND - HURON 230KV CKT 1	469.1	0.10712	109.8507	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z	
20SP	16ALL	2	FROM->TO	G16_035	BROADLAND - HURON 230KV CKT 1	469.2	0.10694	110.1841	G16-017-TAP 345.00 - G16035-TAPII345.00 345KV CKT 1	
20SP	16ALL	2	FROM->TO	G16_035	BROADLAND - HURON 230KV CKT 1	469.2	0.10694	110.1202	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1	
20SP	16ALL	2	FROM->TO	G16_035	BROADLAND - HURON 230KV CKT 1	469.2	0.10694	110.1202	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z	
17SP	16ALL	2	FROM->TO	G16_035	BROADLAND - HURON 230KV CKT 1	465.9	0.09805	109.584	P12:345:UMZB:# 109 #: LOS GRT IN ND. LOS GRT	
17SP	16ALL	2	FROM->TO	G16_035	BROADLAND - HURON 230KV CKT 1	465.9	0.09805	123.6384	G16-044-TAP 345.00 - GROTON-LNX3 345.00 345KV CKT 1	
17SP	16ALL	2	FROM->TO	G16_035	BROADLAND - HURON 230KV CKT 1	465.9	0.09805	123.6384	GROTON - GROTON-LNX3 345.00 345KV CKT Z	
17SP	16ALL	2	FROM->TO	G16_035	BROADLAND - HURON 230KV CKT 1	465.9	0.09805	107.3282	LELAND OLDS - LELAND1-LNX3345.00 345KV CKT Z	
17SP	16ALL	2	FROM->TO	G16_035	BROADLAND - HURON 230KV CKT 1	465.9	0.09805	106.9847	G16-044-TAP 345.00 - LELAND1-LNX3345.00 345KV CKT 1	

SEASON	GROUP	SCENARIO	DIRECTION	SOURCE	MONITORED ELEMENT	RATE		CONTINGENCY	
						(MVA)	TDF	LOADING %	CONTINGENCY
16WP	16ALL	2	FROM->TO	G16_035	BROADLAND - HURON 230KV CKT 1	473.4	0.09648	109.2155	GROTON - GROTON-LNX3 345.00 345KV CKT Z
16WP	16ALL	2	FROM->TO	G16_035	BROADLAND - HURON 230KV CKT 1	473.4	0.09648	109.2155	G16-044-TAP 345.00 - GROTON-LNX3 345.00 345KV CKT 1
25SP	16ALL	2	FROM->TO	G16_035	BROADLAND - HURON 230KV CKT 1	468.2	0.09523	104.8707	P12:345:UMZB:# 109 #: LOS GRT IN ND. LOS GRT
25SP	16ALL	2	FROM->TO	G16_035	BROADLAND - HURON 230KV CKT 1	468.2	0.09523	118.6128	G16-044-TAP 345.00 - GROTON-LNX3 345.00 345KV CKT 1
25SP	16ALL	2	FROM->TO	G16_035	BROADLAND - HURON 230KV CKT 1	468.2	0.09523	118.6128	GROTON - GROTON-LNX3 345.00 345KV CKT Z
25SP	16ALL	2	FROM->TO	G16_035	BROADLAND - HURON 230KV CKT 1	468.2	0.09523	102.6451	LELAND OLDS - LELAND1-LNX3345.00 345KV CKT Z
25SP	16ALL	2	FROM->TO	G16_035	BROADLAND - HURON 230KV CKT 1	468.2	0.09523	102.3461	G16-044-TAP 345.00 - LELAND1-LNX3345.00 345KV CKT 1
17G	16ALL	2	FROM->TO	G16_035	BROADLAND - HURON 230KV CKT 1	469.1	0.09501	102.5666	P12:345:UMZB:# 109 #: LOS GRT IN ND. LOS GRT
17G	16ALL	2	FROM->TO	G16_035	BROADLAND - HURON 230KV CKT 1	469.1	0.09501	116.5872	G16-044-TAP 345.00 - GROTON-LNX3 345.00 345KV CKT 1
17G	16ALL	2	FROM->TO	G16_035	BROADLAND - HURON 230KV CKT 1	469.1	0.09501	116.5872	GROTON - GROTON-LNX3 345.00 345KV CKT Z
17G	16ALL	2	FROM->TO	G16_035	BROADLAND - HURON 230KV CKT 1	469.1	0.09501	100.3243	LELAND OLDS - LELAND1-LNX3345.00 345KV CKT Z
17G	16ALL	2	FROM->TO	G16_035	BROADLAND - HURON 230KV CKT 1	469.1	0.09501	100.0258	G16-044-TAP 345.00 - LELAND1-LNX3345.00 345KV CKT 1
20SP	16ALL	2	FROM->TO	G16_035	BROADLAND - HURON 230KV CKT 1	469.2	0.09481	102.5675	P12:345:UMZB:# 109 #: LOS GRT IN ND. LOS GRT
20SP	16ALL	2	FROM->TO	G16_035	BROADLAND - HURON 230KV CKT 1	469.2	0.09481	116.3229	GROTON - GROTON-LNX3 345.00 345KV CKT Z
20SP	16ALL	2	FROM->TO	G16_035	BROADLAND - HURON 230KV CKT 1	469.2	0.09481	116.3229	G16-044-TAP 345.00 - GROTON-LNX3 345.00 345KV CKT 1
20SP	16ALL	2	FROM->TO	G16_035	BROADLAND - HURON 230KV CKT 1	469.2	0.09481	100.3409	LELAND OLDS - LELAND1-LNX3345.00 345KV CKT Z
20SP	16ALL	2	FROM->TO	G16_035	BROADLAND - HURON 230KV CKT 1	469.2	0.09481	100.0638	G16-044-TAP 345.00 - LELAND1-LNX3345.00 345KV CKT 1
17SP	16ALL	0	FROM->TO	G16_035	BROADLAND - HURON 230KV CKT 1	465.8	0.09449	120.2469	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT
17SP	16ALL	0	FROM->TO	G16_035	BROADLAND - HURON 230KV CKT 1	465.8	0.09449	120.3972	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
17SP	16ALL	0	FROM->TO	G16_035	BROADLAND - HURON 230KV CKT 1	465.8	0.09449	119.6672	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
17SP	16ALL	0	FROM->TO	G16_035	BROADLAND - HURON 230KV CKT 1	465.8	0.09449	119.5814	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1
17SP	16ALL	0	FROM->TO	G16_035	BROADLAND - HURON 230KV CKT 1	465.8	0.09449	119.5814	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z
17SP	16ALL	2	FROM->TO	G16_035	BROADLAND - HURON 230KV CKT 1	465.9	0.09448	119.8347	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT
16WP	16ALL	0	FROM->TO	G16_035	BROADLAND - HURON 230KV CKT 1	473.4	0.09311	102.8483	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT
16WP	16ALL	2	FROM->TO	G16_035	BROADLAND - HURON 230KV CKT 1	473.4	0.09311	102.5315	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT
16WP	16ALL	0	FROM->TO	G16_035	BROADLAND - HURON 230KV CKT 1	473.4	0.09311	102.9328	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
16WP	16ALL	0	FROM->TO	G16_035	BROADLAND - HURON 230KV CKT 1	473.4	0.09311	102.5315	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
16WP	16ALL	0	FROM->TO	G16_035	BROADLAND - HURON 230KV CKT 1	473.4	0.09311	102.4892	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1
16WP	16ALL	0	FROM->TO	G16_035	BROADLAND - HURON 230KV CKT 1	473.4	0.09311	102.4892	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z
25SP	16ALL	0	FROM->TO	G16_035	BROADLAND - HURON 230KV CKT 1	468.1	0.09166	115.0578	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT
25SP	16ALL	2	FROM->TO	G16_035	BROADLAND - HURON 230KV CKT 1	468.2	0.09166	114.6275	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT
25SP	16ALL	0	FROM->TO	G16_035	BROADLAND - HURON 230KV CKT 1	468.1	0.09166	115.186	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
25SP	16ALL	0	FROM->TO	G16_035	BROADLAND - HURON 230KV CKT 1	468.1	0.09166	114.5879	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
25SP	16ALL	0	FROM->TO	G16_035	BROADLAND - HURON 230KV CKT 1	468.1	0.09166	114.5024	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1
25SP	16ALL	0	FROM->TO	G16_035	BROADLAND - HURON 230KV CKT 1	468.1	0.09166	114.5024	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z
17G	16ALL	0	FROM->TO	G16_035	BROADLAND - HURON 230KV CKT 1	469.1	0.09127	112.0503	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT
17G	16ALL	2	FROM->TO	G16_035	BROADLAND - HURON 230KV CKT 1	469.1	0.09127	111.6879	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT
17G	16ALL	0	FROM->TO	G16_035	BROADLAND - HURON 230KV CKT 1	469.1	0.09127	112.1782	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
17G	16ALL	0	FROM->TO	G16_035	BROADLAND - HURON 230KV CKT 1	469.1	0.09127	111.5814	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
17G	16ALL	0	FROM->TO	G16_035	BROADLAND - HURON 230KV CKT 1	469.1	0.09127	111.5174	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1
17G	16ALL	0	FROM->TO	G16_035	BROADLAND - HURON 230KV CKT 1	469.1	0.09127	111.5174	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z
20SP	16ALL	0	FROM->TO	G16_035	BROADLAND - HURON 230KV CKT 1	469.1	0.09125	112.7751	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT
20SP	16ALL	2	FROM->TO	G16_035	BROADLAND - HURON 230KV CKT 1	469.2	0.09125	112.3248	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT
20SP	16ALL	0	FROM->TO	G16_035	BROADLAND - HURON 230KV CKT 1	469.1	0.09125	112.8816	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
20SP	16ALL	0	FROM->TO	G16_035	BROADLAND - HURON 230KV CKT 1	469.1	0.09125	112.3061	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
20SP	16ALL	0	FROM->TO	G16_035	BROADLAND - HURON 230KV CKT 1	469.1	0.09125	112.2421	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1
20SP	16ALL	0	FROM->TO	G16_035	BROADLAND - HURON 230KV CKT 1	469.1	0.09125	112.2421	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z
17SP	16ALL	2	FROM->TO	G16_035	BROADLAND - HURON 230KV CKT 1	465.9	0.08937	111.0819	G09_001ST 345.00 - WATERTOWN 345KV CKT 1
17SP	16ALL	2	FROM->TO	G16_035	BROADLAND - HURON 230KV CKT 1	465.9	0.08937	110.3951	G09_001ST 345.00 - GROTON 345KV CKT 1
17SP	16ALL	0	FROM->TO	G16_035	BROADLAND - HURON 230KV CKT 1	465.8	0.08912	109.736	P12:345:UMZB:# 109 #: LOS GRT IN ND. LOS GRT
17SP	16ALL	0	FROM->TO	G16_035	BROADLAND - HURON 230KV CKT 1	465.8	0.08912	123.9894	G16-044-TAP 345.00 - GROTON-LNX3 345.00 345KV CKT 1
17SP	16ALL	0	FROM->TO	G16_035	BROADLAND - HURON 230KV CKT 1	465.8	0.08912	123.9894	GROTON - GROTON-LNX3 345.00 345KV CKT Z
17SP	16ALL	0	FROM->TO	G16_035	BROADLAND - HURON 230KV CKT 1	465.8	0.08912	107.4643	LELAND OLDS - LELAND1-LNX3345.00 345KV CKT Z
17SP	16ALL	0	FROM->TO	G16_035	BROADLAND - HURON 230KV CKT 1	465.8	0.08912	107.1208	G16-044-TAP 345.00 - LELAND1-LNX3345.00 345KV CKT 1
17SP	16ALL	2	FROM->TO	G16_035	BROADLAND - HURON 230KV CKT 1	465.9	0.08758	105.1205	BISON - HETINGER 230KV CKT 1

SEASON	GROUP	SCENARIO	DIRECTION	SOURCE	MONITORED ELEMENT	RATE		CONTINGENCY		CONTINGENCY
						(MVA)	TDF	LOADING %		
16WP	16ALL	0	FROM->TO	G16_035	BROADLAND - HURON 230KV CKT 1	473.4	0.08755	109.3639	G16-044-TAP 345.00 - GROTON-LNX3 345.00 345KV CKT 1	
16WP	16ALL	0	FROM->TO	G16_035	BROADLAND - HURON 230KV CKT 1	473.4	0.08755	109.3639	GROTON - GROTON-LNX3 345.00 345KV CKT Z	
17G	16ALL	2	FROM->TO	G16_035	BROADLAND - HURON 230KV CKT 1	469.1	0.08669	103.0126	G09_0011ST 345.00 - WATERTOWN 345KV CKT 1	
17G	16ALL	2	FROM->TO	G16_035	BROADLAND - HURON 230KV CKT 1	469.1	0.08669	102.3091	G09_0011ST 345.00 - GROTON 345KV CKT 1	
25SP	16ALL	0	FROM->TO	G16_035	BROADLAND - HURON 230KV CKT 1	468.1	0.08615	104.9725	P12:345:UMZB:# 109 #: LOS GRT IN ND. LOS GRT	
25SP	16ALL	0	FROM->TO	G16_035	BROADLAND - HURON 230KV CKT 1	468.1	0.08615	118.9201	G16-044-TAP 345.00 - GROTON-LNX3 345.00 345KV CKT 1	
25SP	16ALL	0	FROM->TO	G16_035	BROADLAND - HURON 230KV CKT 1	468.1	0.08615	118.9201	GROTON - GROTON-LNX3 345.00 345KV CKT Z	
25SP	16ALL	0	FROM->TO	G16_035	BROADLAND - HURON 230KV CKT 1	468.1	0.08615	102.7311	LELAND OLDS - LELAND1-LNX3345.00 345KV CKT Z	
25SP	16ALL	0	FROM->TO	G16_035	BROADLAND - HURON 230KV CKT 1	468.1	0.08615	102.432	G16-044-TAP 345.00 - LELAND1-LNX3345.00 345KV CKT 1	
17G	16ALL	0	FROM->TO	G16_035	BROADLAND - HURON 230KV CKT 1	469.1	0.08609	102.5023	P12:345:UMZB:# 109 #: LOS GRT IN ND. LOS GRT	
17G	16ALL	0	FROM->TO	G16_035	BROADLAND - HURON 230KV CKT 1	469.1	0.08609	116.6962	G16-044-TAP 345.00 - GROTON-LNX3 345.00 345KV CKT 1	
17G	16ALL	0	FROM->TO	G16_035	BROADLAND - HURON 230KV CKT 1	469.1	0.08609	116.6962	GROTON - GROTON-LNX3 345.00 345KV CKT Z	
17G	16ALL	0	FROM->TO	G16_035	BROADLAND - HURON 230KV CKT 1	469.1	0.08609	100.2466	LELAND OLDS - LELAND1-LNX3345.00 345KV CKT Z	
17SP	16ALL	2	FROM->TO	G16_035	BROADLAND - HURON 230KV CKT 1	465.9	0.08597	104.6791	CENTER - JAMESTOWN 345KV CKT 1	
17SP	16ALL	2	FROM->TO	G16_035	BROADLAND - HURON 230KV CKT 1	465.9	0.08585	107.1945	BUFFALO - JAMESTOWN 345KV CKT 1	
25SP	16ALL	2	FROM->TO	G16_035	BROADLAND - HURON 230KV CKT 1	468.2	0.0858	104.7792	G09_0011ST 345.00 - WATERTOWN 345KV CKT 1	
25SP	16ALL	2	FROM->TO	G16_035	BROADLAND - HURON 230KV CKT 1	468.2	0.0858	104.1384	G09_0011ST 345.00 - GROTON 345KV CKT 1	
20SP	16ALL	0	FROM->TO	G16_035	BROADLAND - HURON 230KV CKT 1	469.1	0.08573	102.6899	P12:345:UMZB:# 109 #: LOS GRT IN ND. LOS GRT	
20SP	16ALL	0	FROM->TO	G16_035	BROADLAND - HURON 230KV CKT 1	469.1	0.08573	116.6291	GROTON - GROTON-LNX3 345.00 345KV CKT Z	
20SP	16ALL	0	FROM->TO	G16_035	BROADLAND - HURON 230KV CKT 1	469.1	0.08573	116.6291	G16-044-TAP 345.00 - GROTON-LNX3 345.00 345KV CKT 1	
20SP	16ALL	0	FROM->TO	G16_035	BROADLAND - HURON 230KV CKT 1	469.1	0.08573	100.4475	LELAND OLDS - LELAND1-LNX3345.00 345KV CKT Z	
20SP	16ALL	0	FROM->TO	G16_035	BROADLAND - HURON 230KV CKT 1	469.1	0.08573	100.1491	G16-044-TAP 345.00 - LELAND1-LNX3345.00 345KV CKT 1	
20SP	16ALL	2	FROM->TO	G16_035	BROADLAND - HURON 230KV CKT 1	469.2	0.08542	102.8442	G09_0011ST 345.00 - WATERTOWN 345KV CKT 1	
20SP	16ALL	2	FROM->TO	G16_035	BROADLAND - HURON 230KV CKT 1	469.2	0.08542	102.1835	G09_0011ST 345.00 - GROTON 345KV CKT 1	
25SP	16ALL	2	FROM->TO	G16_035	BROADLAND - HURON 230KV CKT 1	468.2	0.0851	101.1401	BISON - HETINGER 230KV CKT 1	
17SP	16ALL	2	FROM->TO	G16_035	BROADLAND - HURON 230KV CKT 1	465.9	0.08487	114.4279	RIEL - ROSEAU 500KV CKT 1	
17SP	16ALL	2	FROM->TO	G16_035	BROADLAND - HURON 230KV CKT 1	465.9	0.08487	114.0201	ROSEAU - ROSEAUM 2 500.00 500KV CKT 1	
17SP	16ALL	2	FROM->TO	G16_035	BROADLAND - HURON 230KV CKT 1	465.9	0.08487	114.0201	ROSEAU - ROSEAUM 2 500.00 500KV CKT 1	
17SP	16ALL	2	FROM->TO	G16_035	BROADLAND - HURON 230KV CKT 1	465.9	0.08487	113.5908	FORBES - ROSEAU 500KV CKT 1	
25SP	16ALL	2	FROM->TO	G16_035	BROADLAND - HURON 230KV CKT 1	468.2	0.08393	101.1211	CENTER - JAMESTOWN 345KV CKT 1	
25SP	16ALL	2	FROM->TO	G16_035	BROADLAND - HURON 230KV CKT 1	468.2	0.08374	103.9349	BUFFALO - JAMESTOWN 345KV CKT 1	
20SP	16ALL	2	FROM->TO	G16_035	BROADLAND - HURON 230KV CKT 1	469.2	0.08339	101.5793	BUFFALO - JAMESTOWN 345KV CKT 1	
17G	16ALL	2	FROM->TO	G16_035	BROADLAND - HURON 230KV CKT 1	469.1	0.08324	100.2523	BUFFALO - JAMESTOWN 345KV CKT 1	
25SP	16ALL	2	FROM->TO	G16_035	BROADLAND - HURON 230KV CKT 1	468.2	0.08259	109.0731	RIEL - ROSEAU 500KV CKT 1	
25SP	16ALL	2	FROM->TO	G16_035	BROADLAND - HURON 230KV CKT 1	468.2	0.08259	108.71	ROSEAU - ROSEAUM 2 500.00 500KV CKT 1	
25SP	16ALL	2	FROM->TO	G16_035	BROADLAND - HURON 230KV CKT 1	468.2	0.08259	108.71	ROSEAU - ROSEAUM 2 500.00 500KV CKT 1	
25SP	16ALL	2	FROM->TO	G16_035	BROADLAND - HURON 230KV CKT 1	468.2	0.08259	108.3469	FORBES - ROSEAU 500KV CKT 1	
17G	16ALL	2	FROM->TO	G16_035	BROADLAND - HURON 230KV CKT 1	469.1	0.08227	104.6049	RIEL - ROSEAU 500KV CKT 1	
17G	16ALL	2	FROM->TO	G16_035	BROADLAND - HURON 230KV CKT 1	469.1	0.08227	104.3491	ROSEAU - ROSEAUM 2 500.00 500KV CKT 1	
17G	16ALL	2	FROM->TO	G16_035	BROADLAND - HURON 230KV CKT 1	469.1	0.08227	104.3491	ROSEAU - ROSEAUM 2 500.00 500KV CKT 1	
17G	16ALL	2	FROM->TO	G16_035	BROADLAND - HURON 230KV CKT 1	469.1	0.08227	104.072	FORBES - ROSEAU 500KV CKT 1	
20SP	16ALL	2	FROM->TO	G16_035	BROADLAND - HURON 230KV CKT 1	469.2	0.08226	107.8632	RIEL - ROSEAU 500KV CKT 1	
20SP	16ALL	2	FROM->TO	G16_035	BROADLAND - HURON 230KV CKT 1	469.2	0.08226	107.4582	ROSEAU - ROSEAUM 2 500.00 500KV CKT 1	
20SP	16ALL	2	FROM->TO	G16_035	BROADLAND - HURON 230KV CKT 1	469.2	0.08226	107.4582	ROSEAU - ROSEAUM 2 500.00 500KV CKT 1	
20SP	16ALL	2	FROM->TO	G16_035	BROADLAND - HURON 230KV CKT 1	469.2	0.08226	107.0746	FORBES - ROSEAU 500KV CKT 1	
17SP	16ALL	0	FROM->TO	G16_035	BROADLAND - HURON 230KV CKT 1	465.8	0.08211	111.1963	G09_0011ST 345.00 - WATERTOWN 345KV CKT 1	
17SP	16ALL	0	FROM->TO	G16_035	BROADLAND - HURON 230KV CKT 1	465.8	0.08211	110.5093	G09_0011ST 345.00 - GROTON 345KV CKT 1	
17SP	16ALL	0	FROM->TO	G16_035	BROADLAND - HURON 230KV CKT 1	465.8	0.08072	105.1439	BISON - HETINGER 230KV CKT 1	
17SP	16ALL	0	FROM->TO	G16_035	BROADLAND - HURON 230KV CKT 1	465.8	0.08072	104.736	BISON - MAURINE 230KV CKT 1	
17G	16ALL	0	FROM->TO	G16_035	BROADLAND - HURON 230KV CKT 1	469.1	0.07943	102.9533	G09_0011ST 345.00 - WATERTOWN 345KV CKT 1	
17G	16ALL	0	FROM->TO	G16_035	BROADLAND - HURON 230KV CKT 1	469.1	0.07943	102.2285	G09_0011ST 345.00 - GROTON 345KV CKT 1	
17SP	16ALL	0	FROM->TO	G16_035	BROADLAND - HURON 230KV CKT 1	465.8	0.07941	104.6437	CENTER - JAMESTOWN 345KV CKT 1	
17SP	16ALL	0	FROM->TO	G16_035	BROADLAND - HURON 230KV CKT 1	465.8	0.07929	107.1597	BUFFALO - JAMESTOWN 345KV CKT 1	
25SP	16ALL	0	FROM->TO	G16_035	BROADLAND - HURON 230KV CKT 1	468.1	0.07833	104.8684	G09_0011ST 345.00 - WATERTOWN 345KV CKT 1	
25SP	16ALL	0	FROM->TO	G16_035	BROADLAND - HURON 230KV CKT 1	468.1	0.07833	104.2061	G09_0011ST 345.00 - GROTON 345KV CKT 1	

SEASON	GROUP	SCENARIO	DIRECTION	SOURCE	MONITORED ELEMENT	RATE		CONTINGENCY		CONTINGENCY
						(MVA)	TDF	LOADING %		
17SP	16ALL	0	FROM->TO	G16_035	BROADLAND - HURON 230KV CKT 1	465.8	0.07825	114.3069	RIEL - ROSEAU 500KV CKT 1	
17SP	16ALL	0	FROM->TO	G16_035	BROADLAND - HURON 230KV CKT 1	465.8	0.07825	113.899	ROSEAU - ROSEAU 2 500.00 500KV CKT 1	
17SP	16ALL	0	FROM->TO	G16_035	BROADLAND - HURON 230KV CKT 1	465.8	0.07825	113.899	ROSEAU - ROSEAU 2 500.00 500KV CKT 1	
17SP	16ALL	0	FROM->TO	G16_035	BROADLAND - HURON 230KV CKT 1	465.8	0.07825	113.4696	FORBES - ROSEAU 500KV CKT 1	
25SP	16ALL	0	FROM->TO	G16_035	BROADLAND - HURON 230KV CKT 1	468.1	0.07806	101.1354	BISON - HETINGER 230KV CKT 1	
25SP	16ALL	0	FROM->TO	G16_035	BROADLAND - HURON 230KV CKT 1	468.1	0.07806	100.0673	BISON - MAURINE 230KV CKT 1	
20SP	16ALL	0	FROM->TO	G16_035	BROADLAND - HURON 230KV CKT 1	469.1	0.07795	102.9328	G09_0011ST 345.00 - WATERTOWN 345KV CKT 1	
20SP	16ALL	0	FROM->TO	G16_035	BROADLAND - HURON 230KV CKT 1	469.1	0.07795	102.2933	G09_0011ST 345.00 - GROTON 345KV CKT 1	
25SP	16ALL	0	FROM->TO	G16_035	BROADLAND - HURON 230KV CKT 1	468.1	0.07718	101.0599	CENTER - JAMESTOWN 345KV CKT 1	
25SP	16ALL	0	FROM->TO	G16_035	BROADLAND - HURON 230KV CKT 1	468.1	0.07699	103.853	BUFFALO - JAMESTOWN 345KV CKT 1	
17G	16ALL	0	FROM->TO	G16_035	BROADLAND - HURON 230KV CKT 1	469.1	0.07669	100.0475	BUFFALO - JAMESTOWN 345KV CKT 1	
20SP	16ALL	0	FROM->TO	G16_035	BROADLAND - HURON 230KV CKT 1	469.1	0.07664	101.5184	BUFFALO - JAMESTOWN 345KV CKT 1	
25SP	16ALL	0	FROM->TO	G16_035	BROADLAND - HURON 230KV CKT 1	468.1	0.07578	108.9458	RIEL - ROSEAU 500KV CKT 1	
25SP	16ALL	0	FROM->TO	G16_035	BROADLAND - HURON 230KV CKT 1	468.1	0.07578	108.5826	ROSEAU - ROSEAU 2 500.00 500KV CKT 1	
25SP	16ALL	0	FROM->TO	G16_035	BROADLAND - HURON 230KV CKT 1	468.1	0.07578	108.5826	ROSEAU - ROSEAU 2 500.00 500KV CKT 1	
25SP	16ALL	0	FROM->TO	G16_035	BROADLAND - HURON 230KV CKT 1	468.1	0.07578	108.2194	FORBES - ROSEAU 500KV CKT 1	
17G	16ALL	0	FROM->TO	G16_035	BROADLAND - HURON 230KV CKT 1	469.1	0.07566	104.3751	RIEL - ROSEAU 500KV CKT 1	
17G	16ALL	0	FROM->TO	G16_035	BROADLAND - HURON 230KV CKT 1	469.1	0.07566	104.0979	ROSEAU - ROSEAU 2 500.00 500KV CKT 1	
17G	16ALL	0	FROM->TO	G16_035	BROADLAND - HURON 230KV CKT 1	469.1	0.07566	104.0979	ROSEAU - ROSEAU 2 500.00 500KV CKT 1	
17G	16ALL	0	FROM->TO	G16_035	BROADLAND - HURON 230KV CKT 1	469.1	0.07566	103.8208	FORBES - ROSEAU 500KV CKT 1	
20SP	16ALL	0	FROM->TO	G16_035	BROADLAND - HURON 230KV CKT 1	469.1	0.07545	107.7145	RIEL - ROSEAU 500KV CKT 1	
20SP	16ALL	0	FROM->TO	G16_035	BROADLAND - HURON 230KV CKT 1	469.1	0.07545	107.3308	ROSEAU - ROSEAU 2 500.00 500KV CKT 1	
20SP	16ALL	0	FROM->TO	G16_035	BROADLAND - HURON 230KV CKT 1	469.1	0.07545	107.3308	ROSEAU - ROSEAU 2 500.00 500KV CKT 1	
20SP	16ALL	0	FROM->TO	G16_035	BROADLAND - HURON 230KV CKT 1	469.1	0.07545	106.9471	FORBES - ROSEAU 500KV CKT 1	
17SP	16ALL	2	FROM->TO	G16_035	BROADLAND - HURON 230KV CKT 1	465.9	0.06738	111.0727	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z	
17SP	16ALL	2	FROM->TO	G16_035	BROADLAND - HURON 230KV CKT 1	465.9	0.06738	110.9654	G16035-TAPII345.00 - LELAND2-LNX3345.00 345KV CKT 1	
25SP	16ALL	2	FROM->TO	G16_035	BROADLAND - HURON 230KV CKT 1	468.2	0.06579	106.5122	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z	
25SP	16ALL	2	FROM->TO	G16_035	BROADLAND - HURON 230KV CKT 1	468.2	0.06579	106.4054	G16035-TAPII345.00 - LELAND2-LNX3345.00 345KV CKT 1	
20SP	16ALL	2	FROM->TO	G16_035	BROADLAND - HURON 230KV CKT 1	469.2	0.06538	104.3779	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z	
20SP	16ALL	2	FROM->TO	G16_035	BROADLAND - HURON 230KV CKT 1	469.2	0.06538	104.2926	G16035-TAPII345.00 - LELAND2-LNX3345.00 345KV CKT 1	
17G	16ALL	2	FROM->TO	G16_035	BROADLAND - HURON 230KV CKT 1	469.1	0.06444	103.0604	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z	
17G	16ALL	2	FROM->TO	G16_035	BROADLAND - HURON 230KV CKT 1	469.1	0.06444	102.9752	G16035-TAPII345.00 - LELAND2-LNX3345.00 345KV CKT 1	
25SP	03ALL	0	FROM->TO	G16_010B	BUCKNER7 345.00 - HOLCOMB 345KV CKT 1	726.1	0.11085	103.8695	DBL-THIS-WWRD	
25SP	03ALL	3	FROM->TO	G16_010B	BUCKNER7 345.00 - HOLCOMB 345KV CKT 1	726.1	0.10771	103.6047	DBL-THIS-WWRD	
20L	03ALL	0	FROM->TO	G16_010B	BUCKNER7 345.00 - HOLCOMB 345KV CKT 1	724.9	0.0933	109.7149	G13-010T 345.00 - POST ROCK 345KV CKT 1	
20L	03ALL	0	FROM->TO	G16_010B	BUCKNER7 345.00 - HOLCOMB 345KV CKT 1	724.9	0.0933	105.9489	G13-010T 345.00 - G16-049-TAP 345.00 345KV CKT 1	
20L	03ALL	3	FROM->TO	G16_010B	BUCKNER7 345.00 - HOLCOMB 345KV CKT 1	724.9	0.09137	109.5589	G13-010T 345.00 - POST ROCK 345KV CKT 1	
20L	03ALL	3	FROM->TO	G16_010B	BUCKNER7 345.00 - HOLCOMB 345KV CKT 1	724.9	0.09137	105.7929	G13-010T 345.00 - G16-049-TAP 345.00 345KV CKT 1	
20L	03ALL	4	FROM->TO	G16_010B	BUCKNER7 345.00 - HOLCOMB 345KV CKT 1	724.9	0.08805	109.3405	G13-010T 345.00 - POST ROCK 345KV CKT 1	
20L	03ALL	4	FROM->TO	G16_010B	BUCKNER7 345.00 - HOLCOMB 345KV CKT 1	724.9	0.08805	105.5744	G13-010T 345.00 - G16-049-TAP 345.00 345KV CKT 1	
16WP	03ALL	0	FROM->TO	G16_010B	BUCKNER7 345.00 - HOLCOMB 345KV CKT 1	723	0.08235	102.337	G13-010T 345.00 - POST ROCK 345KV CKT 1	
16WP	03ALL	2	FROM->TO	G16_010B	BUCKNER7 345.00 - HOLCOMB 345KV CKT 1	723.1	0.08037	102.2498	G13-010T 345.00 - POST ROCK 345KV CKT 1	
25SP	03ALL	0	FROM->TO	G16_010B	BUCKNER7 345.00 - HOLCOMB 345KV CKT 1	726.1	0.07842	107.8151	G13-010T 345.00 - POST ROCK 345KV CKT 1	
25SP	03ALL	0	FROM->TO	G16_010B	BUCKNER7 345.00 - HOLCOMB 345KV CKT 1	726.1	0.07842	104.0415	G13-010T 345.00 - G16-049-TAP 345.00 345KV CKT 1	
16WP	03ALL	3	FROM->TO	G16_010B	BUCKNER7 345.00 - HOLCOMB 345KV CKT 1	723.1	0.07767	101.9848	G13-010T 345.00 - POST ROCK 345KV CKT 1	
25SP	03ALL	3	FROM->TO	G16_010B	BUCKNER7 345.00 - HOLCOMB 345KV CKT 1	726.1	0.07643	107.6526	G13-010T 345.00 - POST ROCK 345KV CKT 1	
25SP	03ALL	3	FROM->TO	G16_010B	BUCKNER7 345.00 - HOLCOMB 345KV CKT 1	726.1	0.07643	103.8791	G13-010T 345.00 - G16-049-TAP 345.00 345KV CKT 1	
16WP	03ALL	4	FROM->TO	G16_010B	BUCKNER7 345.00 - HOLCOMB 345KV CKT 1	723.1	0.07461	101.7382	G13-010T 345.00 - POST ROCK 345KV CKT 1	
25SP	03ALL	4	FROM->TO	G16_010B	BUCKNER7 345.00 - HOLCOMB 345KV CKT 1	726.1	0.07305	107.4665	G13-010T 345.00 - POST ROCK 345KV CKT 1	
25SP	03ALL	4	FROM->TO	G16_010B	BUCKNER7 345.00 - HOLCOMB 345KV CKT 1	726.1	0.07305	103.7067	G13-010T 345.00 - G16-049-TAP 345.00 345KV CKT 1	
20WP	08ALL	0	FROM->TO	G16_010A	CANEYRV7 345.00 - NEOSHO 345KV CKT 1	918.4	0.10349	102.8215	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	
16WP	08ALL	0	FROM->TO	G16_010A	CANEYRV7 345.00 - NEOSHO 345KV CKT 1	917.7	0.09901	102.7201	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	
17G	08ALL	0	FROM->TO	G16_010A	CANEYRV7 345.00 - NEOSHO 345KV CKT 1	917.9	0.09726	101.2656	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	
20L	08ALL	0	FROM->TO	G16_010A	CANEYRV7 345.00 - NEOSHO 345KV CKT 1	913.6	0.093	114.0313	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	
20L	08ALL	0	FROM->TO	G16_010A	CANEYRV7 345.00 - NEOSHO 345KV CKT 1	913.6	0.093	109.3537	G16-012-TAP 345.00 - WAVERLY7 345.00 345KV CKT 1	

SEASON	GROUP	SCENARIO	DIRECTION	SOURCE	MONITORED ELEMENT	RATE		CONTINGENCY		CONTINGENCY
						(MVA)	TDF	LOADING %		
20L	08ALL	0	FROM->TO	G16_010A	CANEYRV7 345.00 - NEOSHO 345KV CKT 1	913.6	0.093	104.4828	WAVERLY7 345.00 - WOLF CREEK 345KV CKT 1	
16WP	08ALL	0	FROM->TO	G16_033	CANEYRV7 345.00 - NEOSHO 345KV CKT 1	917.7	0.05339	102.7201	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	
20WP	08ALL	0	FROM->TO	G16_033	CANEYRV7 345.00 - NEOSHO 345KV CKT 1	918.4	0.05257	102.8215	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	
17G	08ALL	0	FROM->TO	G16_033	CANEYRV7 345.00 - NEOSHO 345KV CKT 1	917.9	0.05162	101.2656	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	
20L	08ALL	0	FROM->TO	G16_033	CANEYRV7 345.00 - NEOSHO 345KV CKT 1	913.6	0.04208	114.0313	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	
20L	08ALL	0	FROM->TO	G16_033	CANEYRV7 345.00 - NEOSHO 345KV CKT 1	913.6	0.04208	109.3537	G16-012-TAP 345.00 - WAVERLY7 345.00 345KV CKT 1	
20L	08ALL	0	FROM->TO	G16_033	CANEYRV7 345.00 - NEOSHO 345KV CKT 1	913.6	0.04208	104.4828	WAVERLY7 345.00 - WOLF CREEK 345KV CKT 1	
17SP	03ALL	2	TO->FROM	G16_010B	CHISHOLM - MAIZEE 4 138.00 138KV CKT 1	382	0.04157	116.0425	BENTON - WICHITA 345KV CKT 1	
17SP	03ALL	3	TO->FROM	G16_010B	CHISHOLM - MAIZEE 4 138.00 138KV CKT 1	382	0.03997	115.8065	BENTON - WICHITA 345KV CKT 1	
17SP	03ALL	4	TO->FROM	G16_010B	CHISHOLM - MAIZEE 4 138.00 138KV CKT 1	382	0.03725	115.4621	BENTON - WICHITA 345KV CKT 1	
25SP	03ALL	0	TO->FROM	G16_010B	CHISHOLM - MAIZEE 4 138.00 138KV CKT 1	382	0.03541	103.7695	BENTON - WICHITA 345KV CKT 1	
20SP	03ALL	0	TO->FROM	G16_010B	CHISHOLM - MAIZEE 4 138.00 138KV CKT 1	381.6	0.03511	103.0942	BENTON - WICHITA 345KV CKT 1	
25SP	03ALL	3	TO->FROM	G16_010B	CHISHOLM - MAIZEE 4 138.00 138KV CKT 1	382	0.03372	103.5571	BENTON - WICHITA 345KV CKT 1	
20SP	03ALL	3	TO->FROM	G16_010B	CHISHOLM - MAIZEE 4 138.00 138KV CKT 1	381.7	0.03342	102.8023	BENTON - WICHITA 345KV CKT 1	
17SP	03ALL	0	TO->FROM	G16_010B	CHISHOLM - MAIZEE 4 138.00 138KV CKT 1	382	0.0323	118.4906	BENTON - WICHITA 345KV CKT 1	
25SP	03ALL	4	TO->FROM	G16_010B	CHISHOLM - MAIZEE 4 138.00 138KV CKT 1	382	0.03085	103.2574	BENTON - WICHITA 345KV CKT 1	
20SP	03ALL	4	TO->FROM	G16_010B	CHISHOLM - MAIZEE 4 138.00 138KV CKT 1	381.7	0.03056	102.4787	BENTON - WICHITA 345KV CKT 1	
17G	08ALL	0	FROM->TO	G16_033	CIMARRON - DRAPER LAKE 345KV CKT 1	716	0.08051	102.8066	CLEVELAND - G15066_T 345.00 345KV CKT 1	
16WP	08ALL	0	FROM->TO	G16_033	CIMARRON - DRAPER LAKE 345KV CKT 1	716.1	0.0796	107.1691	CLEVELAND - G15066_T 345.00 345KV CKT 1	
16WP	08ALL	0	FROM->TO	G16_033	CIMARRON - DRAPER LAKE 345KV CKT 1	716.1	0.0796	103.4685	G15066_T 345.00 - SOONER 345KV CKT 1	
17G	08ALL	0	FROM->TO	G16_033	CIMARRON - DRAPER LAKE 345KV CKT 1	716	0.0793	100.4436	GRACEMONT - MINCO 345KV CKT 1	
16WP	08ALL	0	FROM->TO	G16_033	CIMARRON - DRAPER LAKE 345KV CKT 1	716.1	0.07875	103.2964	GRACEMONT - MINCO 345KV CKT 1	
17G	08ALL	0	FROM->TO	G16_033	CIMARRON - DRAPER LAKE 345KV CKT 1	716	0.07873	103.259	ARCADIA - SEMINOLE 345KV CKT 1	
16WP	08ALL	0	FROM->TO	G16_033	CIMARRON - DRAPER LAKE 345KV CKT 1	716.1	0.07839	107.8885	ARCADIA - SEMINOLE 345KV CKT 1	
16WP	08ALL	0	FROM->TO	G16_033	CIMARRON - DRAPER LAKE 345KV CKT 1	716.1	0.07635	100.5274	P12:345:AEPW-GRDA:T.NO.-7:CLEVLND7	
16WP	08ALL	0	FROM->TO	G16_033	CIMARRON - DRAPER LAKE 345KV CKT 1	716.1	0.07333	106.5337	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	
16WP	08ALL	0	FROM->TO	G16_033	CIMARRON - DRAPER LAKE 345KV CKT 1	716.1	0.07333	103.3079	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1	
17G	08ALL	0	FROM->TO	G16_010A	CIMARRON - DRAPER LAKE 345KV CKT 1	716	0.07264	102.8066	CLEVELAND - G15066_T 345.00 345KV CKT 1	
17G	08ALL	0	FROM->TO	G16_010A	CIMARRON - DRAPER LAKE 345KV CKT 1	716	0.07172	100.4436	GRACEMONT - MINCO 345KV CKT 1	
16WP	08ALL	0	FROM->TO	G16_010A	CIMARRON - DRAPER LAKE 345KV CKT 1	716.1	0.07171	107.1691	CLEVELAND - G15066_T 345.00 345KV CKT 1	
16WP	08ALL	0	FROM->TO	G16_010A	CIMARRON - DRAPER LAKE 345KV CKT 1	716.1	0.07171	103.4685	G15066_T 345.00 - SOONER 345KV CKT 1	
16WP	08ALL	0	FROM->TO	G16_010A	CIMARRON - DRAPER LAKE 345KV CKT 1	716.1	0.07115	103.2964	GRACEMONT - MINCO 345KV CKT 1	
17G	08ALL	0	FROM->TO	G16_010A	CIMARRON - DRAPER LAKE 345KV CKT 1	716	0.06817	103.259	ARCADIA - SEMINOLE 345KV CKT 1	
16WP	08ALL	0	FROM->TO	G16_010A	CIMARRON - DRAPER LAKE 345KV CKT 1	716.1	0.06816	100.5274	P12:345:AEPW-GRDA:T.NO.-7:CLEVLND7	
16WP	08ALL	0	FROM->TO	G16_010A	CIMARRON - DRAPER LAKE 345KV CKT 1	716.1	0.0678	107.8885	ARCADIA - SEMINOLE 345KV CKT 1	
16WP	08ALL	0	FROM->TO	G16_010A	CIMARRON - DRAPER LAKE 345KV CKT 1	716.1	0.06634	106.5337	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	
16WP	08ALL	0	FROM->TO	G16_010A	CIMARRON - DRAPER LAKE 345KV CKT 1	716.1	0.06634	103.3079	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1	
17SP	03ALL	0	FROM->TO	G16_010B	CLEARWATER - GILL ENERGY CENTER WEST 138KV CKT 1	137.9	0.42542	274.9221	DBL-G1524-WICH	
17G	03ALL	0	FROM->TO	G16_010B	CLEARWATER - GILL ENERGY CENTER WEST 138KV CKT 1	136.2	0.39796	278.4574	DBL-G1524-WICH	
16WP	03ALL	0	FROM->TO	G16_010B	CLEARWATER - GILL ENERGY CENTER WEST 138KV CKT 1	139	0.3979	267.986	DBL-G1524-WICH	
17SP	03ALL	0	FROM->TO	G16_010B	CLEARWATER - GILL ENERGY CENTER WEST 138KV CKT 1	137.9	0.42542	217.7792	DBL-THIS-G1524	
17G	03ALL	0	FROM->TO	G16_010B	CLEARWATER - GILL ENERGY CENTER WEST 138KV CKT 1	136.2	0.39796	224.4192	DBL-THIS-G1524	
16WP	03ALL	0	FROM->TO	G16_010B	CLEARWATER - GILL ENERGY CENTER WEST 138KV CKT 1	139	0.3979	214.9644	DBL-THIS-G1524	
17SP	03ALL	0	FROM->TO	G16_010B	CLEARWATER - GILL ENERGY CENTER WEST 138KV CKT 1	137.9	0.40859	130.2923	DBL-THIS-WWRD	
17G	03ALL	0	FROM->TO	G16_010B	CLEARWATER - GILL ENERGY CENTER WEST 138KV CKT 1	136.2	0.38098	130.5163	DBL-THIS-WWRD	
16WP	03ALL	0	FROM->TO	G16_010B	CLEARWATER - GILL ENERGY CENTER WEST 138KV CKT 1	139	0.3807	125.8926	DBL-THIS-WWRD	
25SP	08ALL	0	FROM->TO	G16_010A	CLEARWATER - MILAN TAP 138KV CKT 1	109.6	0.03826	139.1266	DBL-THIS-G1524	
25SP	03ALL	3	TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	103.8	0.46605	163.8659	DBL-G1151-TGA	
20SP	03ALL	3	TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	95.3	0.46563	207.3388	DBL-G1151-TGA	
20WP	03ALL	3	TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	102.7	0.46469	222.6672	DBL-G1151-TGA	
20L	03ALL	3	TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	105.4	0.46304	208.7038	DBL-G1151-TGA	
25SP	03ALL	0	TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	103	0.43099	147.7871	DBL-G1151-TGA	
20SP	03ALL	0	TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	94.4	0.43061	186.7065	DBL-G1151-TGA	
20WP	03ALL	0	TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	101.2	0.42974	203.7593	DBL-G1151-TGA	
20L	03ALL	0	TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	104.3	0.42821	190.9068	DBL-G1151-TGA	

SEASON	GROUP	SCENARIO	DIRECTION	SOURCE	MONITORED ELEMENT	RATE		CONTINGENCY		CONTINGENCY
						(MVA)	TDF	LOADING %		
17SP	03ALL		4 TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	476.4	0.54111	101.5661	DBL-G1524-WICH	
17G	03ALL		4 TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	475.8	0.52156	104.7102	DBL-G1524-WICH	
16WP	03ALL		4 TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	476.5	0.52142	102.4921	DBL-G1524-WICH	
17SP	03ALL		3 TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	101.7	0.4853	423.8679	DBL-G1524-WICH	
25SP	03ALL		3 TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	103.8	0.48224	312.9036	DBL-G1524-WICH	
20SP	03ALL		3 TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	95.3	0.48148	396.8043	DBL-G1524-WICH	
20WP	03ALL		3 TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	102.7	0.48015	402.0063	DBL-G1524-WICH	
20L	03ALL		3 TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	105.4	0.4763	373.8277	DBL-G1524-WICH	
17G	03ALL		3 TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	98.7	0.46947	450.9296	DBL-G1524-WICH	
16WP	03ALL		3 TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	102.2	0.46934	427.3396	DBL-G1524-WICH	
17SP	03ALL		2 TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	100.4	0.45174	394.8044	DBL-G1524-WICH	
25SP	03ALL		0 TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	103	0.44844	288.6368	DBL-G1524-WICH	
20SP	03ALL		0 TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	94.4	0.44773	366.1071	DBL-G1524-WICH	
20WP	03ALL		0 TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	101.2	0.4465	374.3165	DBL-G1524-WICH	
20L	03ALL		0 TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	104.3	0.4429	347.3687	DBL-G1524-WICH	
17SP	03ALL		0 TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	99.3	0.42542	392.6662	DBL-G1524-WICH	
17G	03ALL		2 TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	95.7	0.42231	409.9587	DBL-G1524-WICH	
16WP	03ALL		2 TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	99.8	0.4222	386.7873	DBL-G1524-WICH	
17G	03ALL		0 TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	95.9	0.39796	403.3983	DBL-G1524-WICH	
16WP	03ALL		0 TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	100.8	0.3979	375.9926	DBL-G1524-WICH	
25SP	03ALL		3 TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	103.8	0.46605	170.2242	DBL-TGA-MATT	
20SP	03ALL		3 TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	95.3	0.46563	214.2643	DBL-TGA-MATT	
20WP	03ALL		3 TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	102.7	0.46469	228.9963	DBL-TGA-MATT	
20L	03ALL		3 TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	105.4	0.46304	217.3375	DBL-TGA-MATT	
25SP	03ALL		0 TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	103	0.43099	153.7094	DBL-TGA-MATT	
20SP	03ALL		0 TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	94.4	0.43061	193.1684	DBL-TGA-MATT	
20WP	03ALL		0 TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	101.2	0.42974	209.6882	DBL-TGA-MATT	
20L	03ALL		0 TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	104.3	0.42821	199.0563	DBL-TGA-MATT	
17SP	03ALL		3 TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	101.7	0.4853	336.5522	DBL-THIS-G1524	
25SP	03ALL		3 TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	103.8	0.48224	233.1349	DBL-THIS-G1524	
20SP	03ALL		3 TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	95.3	0.48148	310.3405	DBL-THIS-G1524	
20WP	03ALL		3 TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	102.7	0.48015	321.9673	DBL-THIS-G1524	
20L	03ALL		3 TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	105.4	0.4763	295.6493	DBL-THIS-G1524	
17G	03ALL		3 TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	98.7	0.46947	364.4048	DBL-THIS-G1524	
16WP	03ALL		3 TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	102.2	0.46934	343.6801	DBL-THIS-G1524	
17SP	03ALL		2 TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	100.4	0.45174	312.5335	DBL-THIS-G1524	
25SP	03ALL		0 TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	103	0.44844	213.8795	DBL-THIS-G1524	
20SP	03ALL		0 TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	94.4	0.44773	284.8571	DBL-THIS-G1524	
20WP	03ALL		0 TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	101.2	0.4465	298.9213	DBL-THIS-G1524	
20L	03ALL		0 TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	104.3	0.4429	273.9266	DBL-THIS-G1524	
17SP	03ALL		0 TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	99.3	0.42542	313.3107	DBL-THIS-G1524	
17G	03ALL		2 TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	95.7	0.42231	329.7079	DBL-THIS-G1524	
16WP	03ALL		2 TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	99.8	0.4222	309.8333	DBL-THIS-G1524	
17G	03ALL		0 TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	95.9	0.39796	326.6516	DBL-THIS-G1524	
16WP	03ALL		0 TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	100.8	0.3979	302.8775	DBL-THIS-G1524	
25SP	03ALL		3 TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	103.8	0.47281	187.2207	DBL-THIS-WWRD	
20SP	03ALL		3 TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	95.3	0.47272	203.2925	DBL-THIS-WWRD	
20WP	03ALL		3 TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	102.7	0.4721	208.6117	DBL-THIS-WWRD	
17SP	03ALL		3 TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	101.7	0.47129	206.091	DBL-THIS-WWRD	
20L	03ALL		3 TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	105.4	0.47103	202.28	DBL-THIS-WWRD	
20L	03ALL		3 TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	105.4	0.45935	185.5081	DBL-THIS-WWRD	
16WP	03ALL		3 TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	102.2	0.45501	206.582	DBL-THIS-WWRD	
25SP	03ALL		0 TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	103	0.43742	169.593	DBL-THIS-WWRD	
20SP	03ALL		0 TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	94.4	0.43734	183.0437	DBL-THIS-WWRD	
20WP	03ALL		0 TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	101.2	0.43677	190.6508	DBL-THIS-WWRD	

SEASON	GROUP	SCENARIO	DIRECTION	SOURCE	MONITORED ELEMENT	RATE		CONTINGENCY		CONTINGENCY
						(MVA)	TDF	LOADING %		
17SP	03ALL		2 TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	100.4	0.4361	188.0271	DBL-THIS-WWRD	
20L	03ALL		0 TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	104.3	0.43578	185.0195	DBL-THIS-WWRD	
17G	03ALL		2 TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	95.7	0.40633	191.4096	DBL-THIS-WWRD	
16WP	03ALL		2 TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	99.8	0.40597	181.5822	DBL-THIS-WWRD	
25SP	03ALL		3 TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	103.8	0.46605	161.8427	DBL-WWRD-G1151	
20SP	03ALL		3 TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	95.3	0.46563	205.2401	DBL-WWRD-G1151	
20WP	03ALL		3 TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	102.7	0.46469	220.8172	DBL-WWRD-G1151	
20L	03ALL		3 TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	105.4	0.46304	206.8062	DBL-WWRD-G1151	
25SP	03ALL		0 TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	103	0.43099	145.8453	DBL-WWRD-G1151	
20SP	03ALL		0 TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	94.4	0.43061	184.6938	DBL-WWRD-G1151	
20WP	03ALL		0 TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	101.2	0.42974	201.9807	DBL-WWRD-G1151	
20L	03ALL		0 TO->FROM	G16_010B	CLEARWATER - MILAN TAP 138KV CKT 1	104.3	0.42821	189.181	DBL-WWRD-G1151	
16WP	08ALL		0 FROM->TO	G16_010A	CLEVELAND (CLVAUTO1) 345/138/13.8KV TRANSFORMER CKT 1	483.5	0.03905	101.5254	P12:345:AEPW-GRDA:T.NO.-7:CLEVLND7	
16WP	08ALL		0 FROM->TO	G16_010A	CLEVELAND (CLVAUTO1) 345/138/13.8KV TRANSFORMER CKT 1	487.1	0.03905	100.775	P12:345:AEPW-GRDA:T.NO.-7:CLEVLND7	
17G	08ALL		0 FROM->TO	G16_010A	CLEVELAND (CLVAUTO1) 345/138/13.8KV TRANSFORMER CKT 1	487.6	0.03858	100.9588	P12:345:AEPW-GRDA:T.NO.-7:CLEVLND7	
17G	08ALL		0 FROM->TO	G16_010A	CLEVELAND (CLVAUTO1) 345/138/13.8KV TRANSFORMER CKT 1	490	0.03858	100.4643	P12:345:AEPW-GRDA:T.NO.-7:CLEVLND7	
16WP	08ALL		0 FROM->TO	G16_033	CLEVELAND (CLVAUTO1) 345/138/13.8KV TRANSFORMER CKT 1	483.5	0.03855	101.5254	P12:345:AEPW-GRDA:T.NO.-7:CLEVLND7	
16WP	08ALL		0 FROM->TO	G16_033	CLEVELAND (CLVAUTO1) 345/138/13.8KV TRANSFORMER CKT 1	487.1	0.03855	100.775	P12:345:AEPW-GRDA:T.NO.-7:CLEVLND7	
17G	08ALL		0 FROM->TO	G16_033	CLEVELAND (CLVAUTO1) 345/138/13.8KV TRANSFORMER CKT 1	487.6	0.03808	100.9588	P12:345:AEPW-GRDA:T.NO.-7:CLEVLND7	
17G	08ALL		0 FROM->TO	G16_033	CLEVELAND (CLVAUTO1) 345/138/13.8KV TRANSFORMER CKT 1	490	0.03808	100.4643	P12:345:AEPW-GRDA:T.NO.-7:CLEVLND7	
17SP	08ALL		0 FROM->TO	G16_010A	CLEVELAND (CLVAUTO1) 345/138/13.8KV TRANSFORMER CKT 1	473.5	0.03763	112.1337	P12:345:AEPW-GRDA:T.NO.-7:CLEVLND7	
17SP	08ALL		0 FROM->TO	G16_010A	CLEVELAND (CLVAUTO1) 345/138/13.8KV TRANSFORMER CKT 1	481.4	0.03763	110.2936	P12:345:AEPW-GRDA:T.NO.-7:CLEVLND7	
17SP	08ALL		0 FROM->TO	G16_033	CLEVELAND (CLVAUTO1) 345/138/13.8KV TRANSFORMER CKT 1	473.5	0.03712	112.1337	P12:345:AEPW-GRDA:T.NO.-7:CLEVLND7	
17SP	08ALL		0 FROM->TO	G16_033	CLEVELAND (CLVAUTO1) 345/138/13.8KV TRANSFORMER CKT 1	481.4	0.03712	110.2936	P12:345:AEPW-GRDA:T.NO.-7:CLEVLND7	
25SP	08ALL		0 FROM->TO	G16_033	CLEVELAND (CLVAUTO1) 345/138/13.8KV TRANSFORMER CKT 1	472.7	0.03709	100.5537	P12:345:AEPW-GRDA:T.NO.-7:CLEVLND7	
25SP	08ALL		0 FROM->TO	G16_010A	CLEVELAND (CLVAUTO1) 345/138/13.8KV TRANSFORMER CKT 1	472.7	0.03657	100.5537	P12:345:AEPW-GRDA:T.NO.-7:CLEVLND7	
20WP	08ALL		0 FROM->TO	G16_033	CLEVELAND (CLVAUTO1) 345/138/13.8KV TRANSFORMER CKT 1	482.4	0.03637	105.1586	P12:345:AEPW-GRDA:T.NO.-7:CLEVLND7	
20WP	08ALL		0 FROM->TO	G16_033	CLEVELAND (CLVAUTO1) 345/138/13.8KV TRANSFORMER CKT 1	486.8	0.03637	104.2081	P12:345:AEPW-GRDA:T.NO.-7:CLEVLND7	
20SP	08ALL		0 FROM->TO	G16_033	CLEVELAND (CLVAUTO1) 345/138/13.8KV TRANSFORMER CKT 1	472.8	0.03619	112.4158	P12:345:AEPW-GRDA:T.NO.-7:CLEVLND7	
20SP	08ALL		0 FROM->TO	G16_033	CLEVELAND (CLVAUTO1) 345/138/13.8KV TRANSFORMER CKT 1	481	0.03619	110.4994	P12:345:AEPW-GRDA:T.NO.-7:CLEVLND7	
20WP	08ALL		0 FROM->TO	G16_010A	CLEVELAND (CLVAUTO1) 345/138/13.8KV TRANSFORMER CKT 1	482.4	0.03585	105.1586	P12:345:AEPW-GRDA:T.NO.-7:CLEVLND7	
20WP	08ALL		0 FROM->TO	G16_010A	CLEVELAND (CLVAUTO1) 345/138/13.8KV TRANSFORMER CKT 1	486.8	0.03585	104.2081	P12:345:AEPW-GRDA:T.NO.-7:CLEVLND7	
20SP	08ALL		0 FROM->TO	G16_010A	CLEVELAND (CLVAUTO1) 345/138/13.8KV TRANSFORMER CKT 1	472.8	0.03567	112.4158	P12:345:AEPW-GRDA:T.NO.-7:CLEVLND7	
20SP	08ALL		0 FROM->TO	G16_010A	CLEVELAND (CLVAUTO1) 345/138/13.8KV TRANSFORMER CKT 1	481	0.03567	110.4994	P12:345:AEPW-GRDA:T.NO.-7:CLEVLND7	
16WP	09ALL_2		2 FROM->TO	G16_026B	DIXONCO 230.00 - TWIN CHURCH 230KV CKT 1	317.5	0.04053	109.9462	HOSKINS - RAUN 345KV CKT 1	
17G	09ALL_2		2 FROM->TO	G16_026B	DIXONCO 230.00 - TWIN CHURCH 230KV CKT 1	316	0.04003	113.6715	HOSKINS - RAUN 345KV CKT 1	
20WP	09ALL		0 FROM->TO	G16_026B	DIXONCO 230.00 - TWIN CHURCH 230KV CKT 1	317.3	0.03977	107.0514	HOSKINS - RAUN 345KV CKT 1	
16WP	09ALL_2		3 FROM->TO	G16_026B	DIXONCO 230.00 - TWIN CHURCH 230KV CKT 1	317.5	0.03976	109.9112	HOSKINS - RAUN 345KV CKT 1	
20L	09ALL		0 FROM->TO	G16_026B	DIXONCO 230.00 - TWIN CHURCH 230KV CKT 1	316.6	0.03956	112.1103	HOSKINS - RAUN 345KV CKT 1	
17G	09ALL_2		3 FROM->TO	G16_026B	DIXONCO 230.00 - TWIN CHURCH 230KV CKT 1	316	0.03926	113.6313	HOSKINS - RAUN 345KV CKT 1	
20WP	09ALL_2		3 FROM->TO	G16_026B	DIXONCO 230.00 - TWIN CHURCH 230KV CKT 1	317.3	0.03844	107.018	HOSKINS - RAUN 345KV CKT 1	
20L	09ALL_2		3 FROM->TO	G16_026B	DIXONCO 230.00 - TWIN CHURCH 230KV CKT 1	316.6	0.03823	112.0136	HOSKINS - RAUN 345KV CKT 1	
16WP	09ALL_1		2 FROM->TO	G16_026A	DIXONCO 230.00 - TWIN CHURCH 230KV CKT 1	317.5	0.03634	109.7414	HOSKINS - RAUN 345KV CKT 1	
17G	09ALL_1		2 FROM->TO	G16_026A	DIXONCO 230.00 - TWIN CHURCH 230KV CKT 1	316	0.03584	113.4607	HOSKINS - RAUN 345KV CKT 1	
16WP	09ALL		0 FROM->TO	G16_026B	DIXONCO 230.00 - TWIN CHURCH 230KV CKT 1	317.5	0.03566	109.156	HOSKINS - RAUN 345KV CKT 1	
17G	09ALL		0 FROM->TO	G16_026B	DIXONCO 230.00 - TWIN CHURCH 230KV CKT 1	316	0.03516	112.9991	HOSKINS - RAUN 345KV CKT 1	
16WP	09ALL_1		3 FROM->TO	G16_026A	DIXONCO 230.00 - TWIN CHURCH 230KV CKT 1	317.5	0.03507	109.6764	HOSKINS - RAUN 345KV CKT 1	
20WP	09ALL		0 FROM->TO	G16_026A	DIXONCO 230.00 - TWIN CHURCH 230KV CKT 1	317.3	0.03503	106.8165	HOSKINS - RAUN 345KV CKT 1	
20L	09ALL		0 FROM->TO	G16_026A	DIXONCO 230.00 - TWIN CHURCH 230KV CKT 1	316.6	0.03482	111.8748	HOSKINS - RAUN 345KV CKT 1	
17G	09ALL_1		3 FROM->TO	G16_026A	DIXONCO 230.00 - TWIN CHURCH 230KV CKT 1	316	0.03457	113.3955	HOSKINS - RAUN 345KV CKT 1	
20WP	09ALL_1		3 FROM->TO	G16_026A	DIXONCO 230.00 - TWIN CHURCH 230KV CKT 1	317.3	0.03282	106.7381	HOSKINS - RAUN 345KV CKT 1	
16WP	09ALL		0 FROM->TO	G16_026A	DIXONCO 230.00 - TWIN CHURCH 230KV CKT 1	317.5	0.03261	109.0061	HOSKINS - RAUN 345KV CKT 1	
20L	09ALL_1		3 FROM->TO	G16_026A	DIXONCO 230.00 - TWIN CHURCH 230KV CKT 1	316.6	0.03261	111.733	HOSKINS - RAUN 345KV CKT 1	
17G	09ALL		0 FROM->TO	G16_026A	DIXONCO 230.00 - TWIN CHURCH 230KV CKT 1	316	0.0321	112.8485	HOSKINS - RAUN 345KV CKT 1	
17SP	08ALL		0 TO->FROM	G16_033	DOVER SW - HENESSEY 138KV CKT 1	189.6	0.11609	101.6374	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	

SEASON	GROUP	SCENARIO	DIRECTION	SOURCE	MONITORED ELEMENT	RATE		CONTINGENCY		CONTINGENCY
						(MVA)	TDF	LOADING %		
17G	08ALL	0	TO->FROM	G16_033	DOVER SW - HENESSEY 138KV CKT 1	189.3	0.11563	105.213	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	
16WP	08ALL	0	TO->FROM	G16_033	DOVER SW - HENESSEY 138KV CKT 1	189.4	0.11555	108.077	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	
25SP	08ALL	0	TO->FROM	G16_033	DOVER SW - HENESSEY 138KV CKT 1	189.5	0.11529	107.6899	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	
20WP	08ALL	0	TO->FROM	G16_033	DOVER SW - HENESSEY 138KV CKT 1	189.5	0.11516	103.6389	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	
20L	08ALL	0	TO->FROM	G16_033	DOVER SW - HENESSEY 138KV CKT 1	188.8	0.11218	100.1234	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	
16WP	08ALL	0	FROM->TO	G16_010A	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	0.08735	114.1198	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	
16WP	08ALL	0	FROM->TO	G16_010A	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	0.08735	109.429	G16-012-TAP 345.00 - WAVERLY7 345.00 345KV CKT 1	
16WP	08ALL	0	FROM->TO	G16_010A	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	0.08735	104.5894	WAVERLY7 345.00 - WOLF CREEK 345KV CKT 1	
17SP	08ALL	0	FROM->TO	G16_010A	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	716.2	0.08652	113.864	EMPORIA ENERGY CENTER - MORRIS COUNTY 345KV CKT 1	
20WP	08ALL	0	FROM->TO	G16_010A	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	0.08609	111.314	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	
20WP	08ALL	0	FROM->TO	G16_010A	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	0.08609	106.638	G16-012-TAP 345.00 - WAVERLY7 345.00 345KV CKT 1	
20WP	08ALL	0	FROM->TO	G16_010A	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	0.08609	101.7985	WAVERLY7 345.00 - WOLF CREEK 345KV CKT 1	
17SP	08ALL	0	FROM->TO	G16_010A	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	716.2	0.08472	123.229	G16-012-TAP 345.00 - WAVERLY7 345.00 345KV CKT 1	
17SP	08ALL	0	FROM->TO	G16_010A	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	716.2	0.08472	127.9949	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	
17SP	08ALL	0	FROM->TO	G16_010A	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	716.2	0.08472	118.3701	WAVERLY7 345.00 - WOLF CREEK 345KV CKT 1	
20SP	08ALL	0	FROM->TO	G16_010A	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	716.4	0.08466	107.9066	EMPORIA ENERGY CENTER - MORRIS COUNTY 345KV CKT 1	
16WP	08ALL	0	FROM->TO	G16_010A	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	0.08427	113.538	HOYT - JEFFREY ENERGY CENTER 345KV CKT 1	
25SP	08ALL	0	FROM->TO	G16_010A	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	716.8	0.0842	112.0844	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	
25SP	08ALL	0	FROM->TO	G16_010A	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	716.8	0.0842	107.2955	G16-012-TAP 345.00 - WAVERLY7 345.00 345KV CKT 1	
25SP	08ALL	0	FROM->TO	G16_010A	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	716.8	0.0842	102.4406	WAVERLY7 345.00 - WOLF CREEK 345KV CKT 1	
17G	08ALL	0	FROM->TO	G16_010A	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	0.08371	109.4441	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	
17G	08ALL	0	FROM->TO	G16_010A	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	0.08371	104.7364	G16-012-TAP 345.00 - WAVERLY7 345.00 345KV CKT 1	
20SP	08ALL	0	FROM->TO	G16_010A	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	716.4	0.08367	116.6451	G16-012-TAP 345.00 - WAVERLY7 345.00 345KV CKT 1	
20SP	08ALL	0	FROM->TO	G16_010A	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	716.4	0.08367	121.4087	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	
20SP	08ALL	0	FROM->TO	G16_010A	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	716.4	0.08367	111.8014	WAVERLY7 345.00 - WOLF CREEK 345KV CKT 1	
20L	08ALL	0	FROM->TO	G16_010A	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	716.8	0.08293	109.835	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	
20L	08ALL	0	FROM->TO	G16_010A	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	716.8	0.08293	105.1996	G16-012-TAP 345.00 - WAVERLY7 345.00 345KV CKT 1	
20L	08ALL	0	FROM->TO	G16_010A	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	716.8	0.08293	100.3865	WAVERLY7 345.00 - WOLF CREEK 345KV CKT 1	
20WP	08ALL	0	FROM->TO	G16_010A	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	0.08192	110.0151	HOYT - JEFFREY ENERGY CENTER 345KV CKT 1	
16WP	08ALL	0	FROM->TO	G16_010A	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	0.08129	101.9029	HOYT - STRANGER CREEK 345KV CKT 1	
17SP	08ALL	0	FROM->TO	G16_010A	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	716.2	0.08118	132.9934	HOYT - JEFFREY ENERGY CENTER 345KV CKT 1	
25SP	08ALL	0	FROM->TO	G16_010A	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	716.8	0.07989	116.9656	HOYT - JEFFREY ENERGY CENTER 345KV CKT 1	
20SP	08ALL	0	FROM->TO	G16_010A	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	716.4	0.07937	125.8908	HOYT - JEFFREY ENERGY CENTER 345KV CKT 1	
17G	08ALL	0	FROM->TO	G16_010A	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	0.07929	110.0406	HOYT - JEFFREY ENERGY CENTER 345KV CKT 1	
17SP	08ALL	0	FROM->TO	G16_010A	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	716.2	0.0784	120.8114	HOYT - STRANGER CREEK 345KV CKT 1	
25SP	08ALL	0	FROM->TO	G16_010A	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	716.8	0.07713	104.8826	HOYT - STRANGER CREEK 345KV CKT 1	
17SP	03ALL	4	FROM->TO	G16_010B	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	716.9	0.07705	107.2405	HOYT - JEFFREY ENERGY CENTER 345KV CKT 1	
17SP	03ALL	3	FROM->TO	G16_010B	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	716.9	0.07699	107.2099	HOYT - JEFFREY ENERGY CENTER 345KV CKT 1	
17SP	03ALL	2	FROM->TO	G16_010B	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	716.9	0.07696	107.2085	HOYT - JEFFREY ENERGY CENTER 345KV CKT 1	
20SP	08ALL	0	FROM->TO	G16_010A	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	716.4	0.07661	113.8598	HOYT - STRANGER CREEK 345KV CKT 1	
17SP	03ALL	0	FROM->TO	G16_010B	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	716.9	0.07619	107.244	HOYT - JEFFREY ENERGY CENTER 345KV CKT 1	
17SP	08ALL	0	FROM->TO	G16_010A	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	716.2	0.07598	109.5843	CANEYRV7 345.00 - NEOSHO 345KV CKT 1	
17SP	08ALL	0	FROM->TO	G16_010A	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	716.2	0.07547	109.583	MORRIS COUNTY - SWISSVALE 230KV CKT 1	
20SP	08ALL	0	FROM->TO	G16_010A	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	716.4	0.0746	103.7469	CANEYRV7 345.00 - NEOSHO 345KV CKT 1	
20SP	08ALL	0	FROM->TO	G16_010A	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	716.4	0.07353	103.5244	MORRIS COUNTY - SWISSVALE 230KV CKT 1	
17SP	08ALL	0	FROM->TO	G16_010A	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	716.2	0.0716	109.4811	LACYGNE - STILWELL 345KV CKT 1	
17SP	08ALL	0	FROM->TO	G16_010A	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	716.2	0.07133	110.8129	LACYGNE - WEST GARDNER 345KV CKT 1	
20SP	08ALL	0	FROM->TO	G16_010A	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	716.4	0.07117	102.0451	CLEVELAND - G15066_T 345.00 345KV CKT 1	
17SP	08ALL	0	FROM->TO	G16_010A	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	716.2	0.07072	111.4465	P13-115-345:WERE:LANG_TX-1:	
17SP	08ALL	0	FROM->TO	G16_010A	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	716.2	0.07072	111.4465	LANG (LANG TX-1) 345/115/14.4KV TRANSFORMER CKT 1	
17SP	08ALL	0	FROM->TO	G16_010A	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	716.2	0.07072	111.4465	EMPORIA ENERGY CENTER - LANG 345KV CKT 1	
17SP	08ALL	0	FROM->TO	G16_010A	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	716.2	0.07058	110.5522	AUBURN ROAD - JEFFREY ENERGY CENTER 230KV CKT 1	
20SP	08ALL	0	FROM->TO	G16_010A	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	716.4	0.06992	103.6517	LACYGNE - STILWELL 345KV CKT 1	
17SP	08ALL	0	FROM->TO	G16_010A	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	716.2	0.06984	108.8678	MORRIS COUNTY (MORR TX-1) 345/230/14.4KV TRANSFORMER CKT 1	
17SP	08ALL	0	FROM->TO	G16_010A	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	716.2	0.06978	108.8437	MORRIS COUNTY - SWISSVALE 230KV CKT 1	

SEASON	GROUP	SCENARIO	DIRECTION	SOURCE	MONITORED ELEMENT	RATE		CONTINGENCY		CONTINGENCY
						(MVA)	TDF	LOADING %		
17SP	08ALL	0	FROM->TO	G16_010A	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	716.2	0.06978	107.8943		NORTHWEST - SPRING CREEK 345KV CKT 1
17SP	08ALL	0	FROM->TO	G16_010A	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	716.2	0.06978	107.7686		CLEVELAND - G15066_T 345.00 345KV CKT 1
17SP	08ALL	0	FROM->TO	G16_010A	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	716.2	0.06978	107.593		LAWRENCE ENERGY CENTER UNIT 5 230/24.0KV TRANSFORMER CKT 1
17SP	08ALL	0	FROM->TO	G16_010A	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	716.2	0.06978	107.579		LAWRENCE ENERGY CENTER UNIT 5 - LAWRENCE HILL 230KV CKT 1
20SP	08ALL	0	FROM->TO	G16_010A	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	716.4	0.06976	105.1427		LACYGNE - WEST GARDNER 345KV CKT 1
20SP	08ALL	0	FROM->TO	G16_010A	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	716.4	0.06882	105.9824		P13:115-345:WERE:LANG_TX-1:
20SP	08ALL	0	FROM->TO	G16_010A	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	716.4	0.06882	105.9824		LANG (LANG TX-1) 345/115/14.4KV TRANSFORMER CKT 1
20SP	08ALL	0	FROM->TO	G16_010A	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	716.4	0.06882	105.9824		EMPORIA ENERGY CENTER - LANG 345KV CKT 1
20SP	08ALL	0	FROM->TO	G16_010A	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	716.4	0.06874	104.8093		AUBURN ROAD - JEFFREY ENERGY CENTER 230KV CKT 1
20SP	08ALL	0	FROM->TO	G16_010A	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	716.4	0.06807	103.3855		MORRIS COUNTY (MORR TX-1) 345/230/14.4KV TRANSFORMER CKT 1
20SP	08ALL	0	FROM->TO	G16_010A	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	716.4	0.068	103.0175		COW CREEK - MORRISON 138KV CKT 1
20SP	08ALL	0	FROM->TO	G16_010A	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	716.4	0.068	102.3336		G16-012-TAP 345.00 - LACYGNE 345KV CKT 1
20SP	08ALL	0	FROM->TO	G16_010A	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	716.4	0.068	102.2079		G15052_T 345.00 - ROSE HILL 345KV CKT 1
20SP	08ALL	0	FROM->TO	G16_010A	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	716.4	0.068	101.8049		LAWRENCE ENERGY CENTER UNIT 5 230/24.0KV TRANSFORMER CKT 1
16WP	08ALL	0	FROM->TO	G16_033	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	0.04959	114.1198		G16-012-TAP 345.00 - LACYGNE 345KV CKT 1
16WP	08ALL	0	FROM->TO	G16_033	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	0.04959	109.429		G16-012-TAP 345.00 - WAVERLY7 345.00 345KV CKT 1
16WP	08ALL	0	FROM->TO	G16_033	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	0.04959	104.5894		WAVERLY7 345.00 - WOLF CREEK 345KV CKT 1
20WP	08ALL	0	FROM->TO	G16_033	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	0.04935	111.314		G16-012-TAP 345.00 - LACYGNE 345KV CKT 1
20WP	08ALL	0	FROM->TO	G16_033	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	0.04935	106.638		G16-012-TAP 345.00 - WAVERLY7 345.00 345KV CKT 1
20WP	08ALL	0	FROM->TO	G16_033	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	0.04935	101.7985		WAVERLY7 345.00 - WOLF CREEK 345KV CKT 1
25SP	08ALL	0	FROM->TO	G16_033	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	716.8	0.04746	112.0844		G16-012-TAP 345.00 - LACYGNE 345KV CKT 1
25SP	08ALL	0	FROM->TO	G16_033	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	716.8	0.04746	107.2955		G16-012-TAP 345.00 - WAVERLY7 345.00 345KV CKT 1
25SP	08ALL	0	FROM->TO	G16_033	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	716.8	0.04746	102.4406		WAVERLY7 345.00 - WOLF CREEK 345KV CKT 1
17SP	08ALL	0	FROM->TO	G16_033	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	716.2	0.04702	113.864		EMPORIA ENERGY CENTER - MORRIS COUNTY 345KV CKT 1
20SP	08ALL	0	FROM->TO	G16_033	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	716.4	0.04702	107.9066		EMPORIA ENERGY CENTER - MORRIS COUNTY 345KV CKT 1
17SP	08ALL	0	FROM->TO	G16_033	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	716.2	0.04693	123.229		G16-012-TAP 345.00 - WAVERLY7 345.00 345KV CKT 1
17SP	08ALL	0	FROM->TO	G16_033	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	716.2	0.04693	127.9949		G16-012-TAP 345.00 - LACYGNE 345KV CKT 1
17SP	08ALL	0	FROM->TO	G16_033	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	716.2	0.04693	118.3701		WAVERLY7 345.00 - WOLF CREEK 345KV CKT 1
20SP	08ALL	0	FROM->TO	G16_033	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	716.4	0.04693	116.6451		G16-012-TAP 345.00 - WAVERLY7 345.00 345KV CKT 1
20SP	08ALL	0	FROM->TO	G16_033	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	716.4	0.04693	121.4087		G16-012-TAP 345.00 - LACYGNE 345KV CKT 1
20SP	08ALL	0	FROM->TO	G16_033	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	716.4	0.04693	111.8014		WAVERLY7 345.00 - WOLF CREEK 345KV CKT 1
20L	08ALL	0	FROM->TO	G16_033	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	716.8	0.04619	109.835		G16-012-TAP 345.00 - LACYGNE 345KV CKT 1
20L	08ALL	0	FROM->TO	G16_033	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	716.8	0.04619	105.1996		G16-012-TAP 345.00 - WAVERLY7 345.00 345KV CKT 1
20L	08ALL	0	FROM->TO	G16_033	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	716.8	0.04619	100.3865		WAVERLY7 345.00 - WOLF CREEK 345KV CKT 1
17G	08ALL	0	FROM->TO	G16_033	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	0.04596	109.4441		G16-012-TAP 345.00 - LACYGNE 345KV CKT 1
17G	08ALL	0	FROM->TO	G16_033	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	0.04596	104.7364		G16-012-TAP 345.00 - WAVERLY7 345.00 345KV CKT 1
16WP	08ALL	0	FROM->TO	G16_033	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	0.04498	113.538		HOYT - JEFFREY ENERGY CENTER 345KV CKT 1
20WP	08ALL	0	FROM->TO	G16_033	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	0.04464	110.0151		HOYT - JEFFREY ENERGY CENTER 345KV CKT 1
16WP	08ALL	0	FROM->TO	G16_033	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	0.04345	101.9029		HOYT - STRANGER CREEK 345KV CKT 1
25SP	08ALL	0	FROM->TO	G16_033	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	716.8	0.04262	116.9656		HOYT - JEFFREY ENERGY CENTER 345KV CKT 1
20SP	08ALL	0	FROM->TO	G16_033	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	716.4	0.04209	125.8908		HOYT - JEFFREY ENERGY CENTER 345KV CKT 1
17SP	08ALL	0	FROM->TO	G16_033	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	716.2	0.04196	132.9934		HOYT - JEFFREY ENERGY CENTER 345KV CKT 1
25SP	08ALL	0	FROM->TO	G16_033	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	716.8	0.04118	104.8826		HOYT - STRANGER CREEK 345KV CKT 1
20SP	08ALL	0	FROM->TO	G16_033	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	716.4	0.04067	113.8598		HOYT - STRANGER CREEK 345KV CKT 1
17SP	08ALL	0	FROM->TO	G16_033	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	716.2	0.04054	120.8114		HOYT - STRANGER CREEK 345KV CKT 1
20SP	08ALL	0	FROM->TO	G16_033	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	716.4	0.04014	102.0451		CLEVELAND - G15066_T 345.00 345KV CKT 1
17G	08ALL	0	FROM->TO	G16_033	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	0.04002	110.0406		HOYT - JEFFREY ENERGY CENTER 345KV CKT 1
17SP	08ALL	0	FROM->TO	G16_033	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	716.2	0.03937	109.583		MORRIS COUNTY - SWISSVALE 230KV CKT 1
20SP	08ALL	0	FROM->TO	G16_033	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	716.4	0.03933	103.5244		MORRIS COUNTY - SWISSVALE 230KV CKT 1
20SP	08ALL	0	FROM->TO	G16_033	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	716.4	0.03917	103.7469		CANEYRV7 345.00 - NEOSHO 345KV CKT 1
17SP	08ALL	0	FROM->TO	G16_033	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	716.2	0.03914	109.5843		CANEYRV7 345.00 - NEOSHO 345KV CKT 1
17SP	08ALL	0	FROM->TO	G16_033	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	716.2	0.03856	110.8129		LACYGNE - WEST GARDNER 345KV CKT 1
20SP	08ALL	0	FROM->TO	G16_033	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	716.4	0.03853	105.1427		LACYGNE - WEST GARDNER 345KV CKT 1
17SP	08ALL	0	FROM->TO	G16_033	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	716.2	0.03809	109.4811		LACYGNE - STILWELL 345KV CKT 1
20SP	08ALL	0	FROM->TO	G16_033	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	716.4	0.03806	103.6517		LACYGNE - STILWELL 345KV CKT 1

SEASON	GROUP	SCENARIO	DIRECTION	SOURCE	MONITORED ELEMENT	RATE		CONTINGENCY		CONTINGENCY
						(MVA)	TDF	LOADING %		
17SP	08ALL	0	FROM->TO	G16_033	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	716.2	0.03671	111.4465	P13:115-345:WERE:LANG_TX-1:	
17SP	08ALL	0	FROM->TO	G16_033	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	716.2	0.03671	111.4465	LANG (LANG TX-1) 345/115/14.4KV TRANSFORMER CKT 1	
17SP	08ALL	0	FROM->TO	G16_033	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	716.2	0.03671	111.4465	EMPORIA ENERGY CENTER - LANG 345KV CKT 1	
20SP	08ALL	0	FROM->TO	G16_033	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	716.4	0.03668	105.9824	P13:115-345:WERE:LANG_TX-1:	
20SP	08ALL	0	FROM->TO	G16_033	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	716.4	0.03668	105.9824	LANG (LANG TX-1) 345/115/14.4KV TRANSFORMER CKT 1	
20SP	08ALL	0	FROM->TO	G16_033	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	716.4	0.03668	105.9824	EMPORIA ENERGY CENTER - LANG 345KV CKT 1	
17SP	08ALL	0	FROM->TO	G16_033	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	716.2	0.03624	110.5522	AUBURN ROAD - JEFFREY ENERGY CENTER 230KV CKT 1	
17SP	08ALL	0	FROM->TO	G16_033	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	716.2	0.03623	108.8437	MORRIS COUNTY - SWISSVALE 230KV CKT 1	
17SP	08ALL	0	FROM->TO	G16_033	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	716.2	0.03623	107.8943	NORTHWEST - SPRING CREEK 345KV CKT 1	
17SP	08ALL	0	FROM->TO	G16_033	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	716.2	0.03623	107.7686	CLEVELAND - G15066_T 345.00 345KV CKT 1	
17SP	08ALL	0	FROM->TO	G16_033	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	716.2	0.03623	107.593	LAWRENCE ENERGY CENTER UNIT 5 230/24.0KV TRANSFORMER CKT 1	
17SP	08ALL	0	FROM->TO	G16_033	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	716.2	0.03623	107.579	LAWRENCE ENERGY CENTER UNIT 5 - LAWRENCE HILL 230KV CKT 1	
20SP	08ALL	0	FROM->TO	G16_033	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	716.4	0.03622	104.8093	AUBURN ROAD - JEFFREY ENERGY CENTER 230KV CKT 1	
20SP	08ALL	0	FROM->TO	G16_033	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	716.4	0.03621	103.0175	COW CREEK - MORRISON 138KV CKT 1	
20SP	08ALL	0	FROM->TO	G16_033	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	716.4	0.03621	102.3336	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	
20SP	08ALL	0	FROM->TO	G16_033	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	716.4	0.03621	102.2079	G15052_T 345.00 - ROSE HILL 345KV CKT 1	
20SP	08ALL	0	FROM->TO	G16_033	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	716.4	0.03621	101.8049	LAWRENCE ENERGY CENTER UNIT 5 230/24.0KV TRANSFORMER CKT 1	
17SP	08ALL	0	FROM->TO	G16_033	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	716.2	0.0359	108.8678	MORRIS COUNTY (MORR TX-1) 345/230/14.4KV TRANSFORMER CKT 1	
20SP	08ALL	0	FROM->TO	G16_033	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	716.4	0.0359	103.3855	MORRIS COUNTY (MORR TX-1) 345/230/14.4KV TRANSFORMER CKT 1	
17SP	03ALL	2	FROM->TO	G16_010B	EVANS ENERGY CENTER NORTH - MAIZEW 4 138.00 138KV CKT 1	381.1	0.04157	121.6695	BENTON - WICHITA 345KV CKT 1	
17SP	03ALL	3	FROM->TO	G16_010B	EVANS ENERGY CENTER NORTH - MAIZEW 4 138.00 138KV CKT 1	381.1	0.03997	121.4329	BENTON - WICHITA 345KV CKT 1	
17SP	03ALL	4	FROM->TO	G16_010B	EVANS ENERGY CENTER NORTH - MAIZEW 4 138.00 138KV CKT 1	381.1	0.03725	121.0876	BENTON - WICHITA 345KV CKT 1	
25SP	03ALL	0	FROM->TO	G16_010B	EVANS ENERGY CENTER NORTH - MAIZEW 4 138.00 138KV CKT 1	380.9	0.03541	111.0789	BENTON - WICHITA 345KV CKT 1	
20SP	03ALL	0	FROM->TO	G16_010B	EVANS ENERGY CENTER NORTH - MAIZEW 4 138.00 138KV CKT 1	379.9	0.03511	109.4255	BENTON - WICHITA 345KV CKT 1	
25SP	03ALL	3	FROM->TO	G16_010B	EVANS ENERGY CENTER NORTH - MAIZEW 4 138.00 138KV CKT 1	380.9	0.03372	110.8396	BENTON - WICHITA 345KV CKT 1	
20SP	03ALL	3	FROM->TO	G16_010B	EVANS ENERGY CENTER NORTH - MAIZEW 4 138.00 138KV CKT 1	379.9	0.03342	109.1593	BENTON - WICHITA 345KV CKT 1	
17SP	03ALL	0	FROM->TO	G16_010B	EVANS ENERGY CENTER NORTH - MAIZEW 4 138.00 138KV CKT 1	380.8	0.0323	124.2474	BENTON - WICHITA 345KV CKT 1	
25SP	03ALL	4	FROM->TO	G16_010B	EVANS ENERGY CENTER NORTH - MAIZEW 4 138.00 138KV CKT 1	380.9	0.03085	110.5653	BENTON - WICHITA 345KV CKT 1	
20SP	03ALL	4	FROM->TO	G16_010B	EVANS ENERGY CENTER NORTH - MAIZEW 4 138.00 138KV CKT 1	379.9	0.03056	108.8342	BENTON - WICHITA 345KV CKT 1	
17SP	08ALL	0	FROM->TO	G16_033	FAIRFAX TAP - SHIDLER 138KV CKT 1	179	0.04406	113.7053	CLEVELAND - G15066_T 345.00 345KV CKT 1	
17SP	08ALL	0	FROM->TO	G16_033	FAIRFAX TAP - SHIDLER 138KV CKT 1	179	0.04406	103.0908	G15066_T 345.00 - SOONER 345KV CKT 1	
20SP	08ALL	0	FROM->TO	G16_033	FAIRFAX TAP - SHIDLER 138KV CKT 1	179	0.04309	109.8515	CLEVELAND - G15066_T 345.00 345KV CKT 1	
20L	08ALL	0	FROM->TO	G16_033	FAIRFAX TAP - SHIDLER 138KV CKT 1	208.6	0.03315	105.0728	CLEVELAND - G15066_T 345.00 345KV CKT 1	
17SP	08ALL	0	TO->FROM	G16_033	FAIRFAX TAP - WEBB CITY TAP 138KV CKT 1	179	0.04406	113.7053	CLEVELAND - G15066_T 345.00 345KV CKT 1	
17SP	08ALL	0	TO->FROM	G16_033	FAIRFAX TAP - WEBB CITY TAP 138KV CKT 1	179	0.04406	103.0908	G15066_T 345.00 - SOONER 345KV CKT 1	
20SP	08ALL	0	TO->FROM	G16_033	FAIRFAX TAP - WEBB CITY TAP 138KV CKT 1	179	0.04309	109.8515	CLEVELAND - G15066_T 345.00 345KV CKT 1	
20L	08ALL	0	TO->FROM	G16_033	FAIRFAX TAP - WEBB CITY TAP 138KV CKT 1	208.6	0.03315	105.0728	CLEVELAND - G15066_T 345.00 345KV CKT 1	
20WP	08ALL	0	TO->FROM	G16_010A	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	159.9	0.0449	122.5337	VIOLA 7 345.00 - WICHITA 345KV CKT 1	
25SP	08ALL	0	TO->FROM	G16_010A	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	159.9	0.04489	119.3309	VIOLA 7 345.00 - WICHITA 345KV CKT 1	
20SP	08ALL	0	TO->FROM	G16_010A	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	159.6	0.04484	124.0625	VIOLA 7 345.00 - WICHITA 345KV CKT 1	
20L	08ALL	0	TO->FROM	G16_010A	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	158	0.04197	121.0736	VIOLA 7 345.00 - WICHITA 345KV CKT 1	
17SP	08ALL	0	TO->FROM	G16_010A	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	158.9	0.03601	141.7567	VIOLA 7 345.00 - WICHITA 345KV CKT 1	
16WP	08ALL	0	TO->FROM	G16_010A	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	159.7	0.03542	150.0647	VIOLA 7 345.00 - WICHITA 345KV CKT 1	
17G	08ALL	0	TO->FROM	G16_010A	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	158.9	0.03434	148.0523	VIOLA 7 345.00 - WICHITA 345KV CKT 1	
25SP	16ALL	0	TO->FROM	G16_035	FARGO - JAMES TOWN 230KV CKT 1	345.2	0.07338	102.1584	BUFFALO - JAMESTOWN 345KV CKT 1	
25SP	16ALL	2	TO->FROM	G16_035	FARGO - JAMES TOWN 230KV CKT 1	345.3	0.06595	102.0068	BUFFALO - JAMESTOWN 345KV CKT 1	
16WP	03ALL	0	TO->FROM	G16_010B	FPL SWITCH - WOODWARD 138KV CKT 1	180.4	0.03481	115.617	DBL-G1524-WICH	
17G	03ALL	0	TO->FROM	G16_010B	FPL SWITCH - WOODWARD 138KV CKT 1	147.6	0.03472	139.692	DBL-G1524-WICH	
17G	03ALL	0	TO->FROM	G16_010B	FPL SWITCH - WOODWARD 138KV CKT 1	147.6	0.03472	113.5402	DBL-THIS-G1524	
17SP	03ALL	0	TO->FROM	G16_010B	FPL SWITCH - WOODWARD 138KV CKT 1	149.7	0.03222	123.6166	DBL-G1524-WICH	
16WP	03ALL	2	TO->FROM	G16_010B	FPL SWITCH - WOODWARD 138KV CKT 1	180.4	0.03211	115.4165	DBL-G1524-WICH	
17G	03ALL	2	TO->FROM	G16_010B	FPL SWITCH - WOODWARD 138KV CKT 1	147.6	0.03202	139.5759	DBL-G1524-WICH	
17G	03ALL	2	TO->FROM	G16_010B	FPL SWITCH - WOODWARD 138KV CKT 1	147.6	0.03202	113.6951	DBL-THIS-G1524	
17G	03ALL	0	TO->FROM	G16_010B	FPL SWITCH - WOODWARD 138KV CKT 1	147.6	0.03139	123.6328	MATHWSN7 345.00 - TATONGA7 345.00 345KV CKT 1	
17G	03ALL	0	TO->FROM	G16_010B	FPL SWITCH - WOODWARD 138KV CKT 1	147.6	0.03139	109.6084	G11_051T 345.00 - TATONGA7 345.00 345KV CKT 1	

SEASON	GROUP	SCENARIO	DIRECTION	SOURCE	MONITORED ELEMENT	RATE		CONTINGENCY		CONTINGENCY
						(MVA)	TDF	LOADING %		
17G	03ALL	0	TO->FROM	G16_010B	FPL SWITCH - WOODWARD 138KV CKT 1	147.6	0.03139	105.6111	G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1	
16WP	03ALL	0	TO->FROM	G16_010B	FPL SWITCH - WOODWARD 138KV CKT 1	180.4	0.03127	104.0774	MATHWSN7 345.00 - TATONGA7 345.00 345KV CKT 1	
17SP	16ALL	2	TO->FROM	G16_035	FT RANDAL - FT THOMPSON 230KV CKT 1	319.8	0.06521	115.397	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	
17SP	16ALL	2	TO->FROM	G16_035	FT RANDAL - FT THOMPSON 230KV CKT 1	319.8	0.06521	115.397	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	
17SP	16ALL	2	TO->FROM	G16_035	FT RANDAL - FT THOMPSON 230KV CKT 1	319.8	0.06521	113.4896	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	
17SP	16ALL	2	TO->FROM	G16_035	FT RANDAL - FT THOMPSON 230KV CKT 1	319.8	0.06521	113.3332	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	
17SP	16ALL	2	TO->FROM	G16_035	FT RANDAL - FT THOMPSON 230KV CKT 1	319.8	0.06521	110.519	FT THOMPSON - FTTHOM2-LNX3345.00 345KV CKT Z	
17SP	16ALL	2	TO->FROM	G16_035	FT RANDAL - FT THOMPSON 230KV CKT 1	319.8	0.06521	110.1124	FTTHOM2-LNX3345.00 - GRPRAR2-LNX3345.00 345KV CKT 1	
17SP	16ALL	2	TO->FROM	G16_035	FT RANDAL - FT THOMPSON 230KV CKT 1	319.8	0.06521	110.1124	GRPRAR2-LNX3345.00 - YANKTON 345KV CKT Z	
17SP	16ALL	2	TO->FROM	G16_035	FT RANDAL - FT THOMPSON 230KV CKT 1	319.8	0.0645	118.7697	P12:230:UMZW:# 739 #: FT IN SD. FT-LP LINE FAULT	
17SP	16ALL	2	TO->FROM	G16_035	FT RANDAL - FT THOMPSON 230KV CKT 1	319.8	0.0645	116.018	FT RANDAL - LAKE PLATT 230KV CKT 1	
17SP	16ALL	0	TO->FROM	G16_035	FT RANDAL - FT THOMPSON 230KV CKT 1	319.8	0.06204	115.4256	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	
17SP	16ALL	0	TO->FROM	G16_035	FT RANDAL - FT THOMPSON 230KV CKT 1	319.8	0.06204	115.4256	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	
17SP	16ALL	0	TO->FROM	G16_035	FT RANDAL - FT THOMPSON 230KV CKT 1	319.8	0.06204	113.5181	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	
17SP	16ALL	0	TO->FROM	G16_035	FT RANDAL - FT THOMPSON 230KV CKT 1	319.8	0.06204	113.3618	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	
17SP	16ALL	0	TO->FROM	G16_035	FT RANDAL - FT THOMPSON 230KV CKT 1	319.8	0.06204	110.5475	FT THOMPSON - FTTHOM2-LNX3345.00 345KV CKT Z	
17SP	16ALL	0	TO->FROM	G16_035	FT RANDAL - FT THOMPSON 230KV CKT 1	319.8	0.06204	110.141	FTTHOM2-LNX3345.00 - GRPRAR2-LNX3345.00 345KV CKT 1	
17SP	16ALL	0	TO->FROM	G16_035	FT RANDAL - FT THOMPSON 230KV CKT 1	319.8	0.06204	110.141	GRPRAR2-LNX3345.00 - YANKTON 345KV CKT Z	
17SP	16ALL	0	TO->FROM	G16_035	FT RANDAL - FT THOMPSON 230KV CKT 1	319.8	0.06165	118.7129	P12:230:UMZW:# 739 #: FT IN SD. FT-LP LINE FAULT	
17SP	16ALL	0	TO->FROM	G16_035	FT RANDAL - FT THOMPSON 230KV CKT 1	319.8	0.06165	115.9611	FT RANDAL - LAKE PLATT 230KV CKT 1	
25SP	16ALL	2	TO->FROM	G16_035	FT RANDAL - FT THOMPSON 230KV CKT 1	319.6	0.05981	103.5409	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	
25SP	16ALL	2	TO->FROM	G16_035	FT RANDAL - FT THOMPSON 230KV CKT 1	319.6	0.05981	103.4157	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	
25SP	16ALL	2	TO->FROM	G16_035	FT RANDAL - FT THOMPSON 230KV CKT 1	319.6	0.05981	100.85	FT THOMPSON - FTTHOM2-LNX3345.00 345KV CKT Z	
25SP	16ALL	2	TO->FROM	G16_035	FT RANDAL - FT THOMPSON 230KV CKT 1	319.6	0.05981	100.4746	GRPRAR2-LNX3345.00 - YANKTON 345KV CKT Z	
25SP	16ALL	2	TO->FROM	G16_035	FT RANDAL - FT THOMPSON 230KV CKT 1	319.6	0.05981	100.4746	FTTHOM2-LNX3345.00 - GRPRAR2-LNX3345.00 345KV CKT 1	
20SP	16ALL	2	TO->FROM	G16_035	FT RANDAL - FT THOMPSON 230KV CKT 1	319.5	0.05955	102.4022	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	
20SP	16ALL	2	TO->FROM	G16_035	FT RANDAL - FT THOMPSON 230KV CKT 1	319.5	0.05955	102.277	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	
25SP	16ALL	2	TO->FROM	G16_035	FT RANDAL - FT THOMPSON 230KV CKT 1	319.6	0.05744	106.6862	P12:230:UMZW:# 739 #: FT IN SD. FT-LP LINE FAULT	
25SP	16ALL	2	TO->FROM	G16_035	FT RANDAL - FT THOMPSON 230KV CKT 1	319.6	0.05744	104.0892	FT RANDAL - LAKE PLATT 230KV CKT 1	
20SP	16ALL	2	TO->FROM	G16_035	FT RANDAL - FT THOMPSON 230KV CKT 1	319.5	0.05719	105.8017	P12:230:UMZW:# 739 #: FT IN SD. FT-LP LINE FAULT	
20SP	16ALL	2	TO->FROM	G16_035	FT RANDAL - FT THOMPSON 230KV CKT 1	319.5	0.05719	103.3291	FT RANDAL - LAKE PLATT 230KV CKT 1	
25SP	16ALL	0	TO->FROM	G16_035	FT RANDAL - FT THOMPSON 230KV CKT 1	319.6	0.05675	103.5807	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	
25SP	16ALL	0	TO->FROM	G16_035	FT RANDAL - FT THOMPSON 230KV CKT 1	319.6	0.05675	103.4243	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	
25SP	16ALL	0	TO->FROM	G16_035	FT RANDAL - FT THOMPSON 230KV CKT 1	319.6	0.05675	100.8585	FT THOMPSON - FTTHOM2-LNX3345.00 345KV CKT Z	
25SP	16ALL	0	TO->FROM	G16_035	FT RANDAL - FT THOMPSON 230KV CKT 1	319.6	0.05675	100.4831	FTTHOM2-LNX3345.00 - GRPRAR2-LNX3345.00 345KV CKT 1	
25SP	16ALL	0	TO->FROM	G16_035	FT RANDAL - FT THOMPSON 230KV CKT 1	319.6	0.05675	100.4831	GRPRAR2-LNX3345.00 - YANKTON 345KV CKT Z	
20SP	16ALL	0	TO->FROM	G16_035	FT RANDAL - FT THOMPSON 230KV CKT 1	319.6	0.0565	102.4072	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	
20SP	16ALL	0	TO->FROM	G16_035	FT RANDAL - FT THOMPSON 230KV CKT 1	319.6	0.0565	102.2848	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	
25SP	16ALL	0	TO->FROM	G16_035	FT RANDAL - FT THOMPSON 230KV CKT 1	319.6	0.05478	106.6121	P12:230:UMZW:# 739 #: FT IN SD. FT-LP LINE FAULT	
25SP	16ALL	0	TO->FROM	G16_035	FT RANDAL - FT THOMPSON 230KV CKT 1	319.6	0.05478	104.0151	FT RANDAL - LAKE PLATT 230KV CKT 1	
20SP	16ALL	0	TO->FROM	G16_035	FT RANDAL - FT THOMPSON 230KV CKT 1	319.6	0.05453	105.7257	P12:230:UMZW:# 739 #: FT IN SD. FT-LP LINE FAULT	
20SP	16ALL	0	TO->FROM	G16_035	FT RANDAL - FT THOMPSON 230KV CKT 1	319.6	0.05453	103.2226	FT RANDAL - LAKE PLATT 230KV CKT 1	
17SP	16ALL	2	TO->FROM	G16_035	FT RANDAL - LAKE PLATT 230KV CKT 1	310.3	0.06399	110.7171	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	
17SP	16ALL	2	TO->FROM	G16_035	FT RANDAL - LAKE PLATT 230KV CKT 1	310.3	0.06399	110.7171	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	
17SP	16ALL	2	TO->FROM	G16_035	FT RANDAL - LAKE PLATT 230KV CKT 1	310.3	0.06399	108.7513	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	
17SP	16ALL	2	TO->FROM	G16_035	FT RANDAL - LAKE PLATT 230KV CKT 1	310.3	0.06399	108.6223	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	
17SP	16ALL	2	TO->FROM	G16_035	FT RANDAL - LAKE PLATT 230KV CKT 1	310.3	0.06399	105.7864	FT THOMPSON - FTTHOM2-LNX3345.00 345KV CKT Z	
17SP	16ALL	2	TO->FROM	G16_035	FT RANDAL - LAKE PLATT 230KV CKT 1	310.3	0.06399	105.3674	FTTHOM2-LNX3345.00 - GRPRAR2-LNX3345.00 345KV CKT 1	
17SP	16ALL	2	TO->FROM	G16_035	FT RANDAL - LAKE PLATT 230KV CKT 1	310.3	0.06399	105.3674	GRPRAR2-LNX3345.00 - YANKTON 345KV CKT Z	
17SP	16ALL	2	TO->FROM	G16_035	FT RANDAL - LAKE PLATT 230KV CKT 1	310.3	0.06371	114.2146	P12:230:UMZW:# 738 #: FT IN SD. FT-FR LINE FAULT	
17SP	16ALL	0	TO->FROM	G16_035	FT RANDAL - LAKE PLATT 230KV CKT 1	310.4	0.0609	114.1222	P12:230:UMZW:# 738 #: FT IN SD. FT-FR LINE FAULT	
17SP	16ALL	0	TO->FROM	G16_035	FT RANDAL - LAKE PLATT 230KV CKT 1	310.4	0.06088	110.7137	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	
17SP	16ALL	0	TO->FROM	G16_035	FT RANDAL - LAKE PLATT 230KV CKT 1	310.4	0.06088	110.7137	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	
17SP	16ALL	0	TO->FROM	G16_035	FT RANDAL - LAKE PLATT 230KV CKT 1	310.4	0.06088	108.7485	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	
17SP	16ALL	0	TO->FROM	G16_035	FT RANDAL - LAKE PLATT 230KV CKT 1	310.4	0.06088	108.6197	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	

SEASON	GROUP	SCENARIO	DIRECTION	SOURCE	MONITORED ELEMENT	RATE (MVA)	TDF	CONTINGENCY LOADING %	CONTINGENCY
17SP	16ALL	0	TO->FROM	G16_035	FT RANDAL - LAKE PLATT 230KV CKT 1	310.4	0.06088	105.7524	FT THOMPSON - FTTHOM2-LNX3345.00 345KV CKT Z
17SP	16ALL	0	TO->FROM	G16_035	FT RANDAL - LAKE PLATT 230KV CKT 1	310.4	0.06088	105.3336	GRPRAR2-LNX3345.00 - YANKTON 345KV CKT Z
17SP	16ALL	0	TO->FROM	G16_035	FT RANDAL - LAKE PLATT 230KV CKT 1	310.4	0.06088	105.3336	FTTHOM2-LNX3345.00 - GRPRAR2-LNX3345.00 345KV CKT 1
25SP	16ALL	2	TO->FROM	G16_035	FT RANDAL - LAKE PLATT 230KV CKT 1	312.7	0.05672	101.3448	P12:230:UMZW:# 738 #: FT IN SD. FT-FR LINE FAULT
20SP	16ALL	2	TO->FROM	G16_035	FT RANDAL - LAKE PLATT 230KV CKT 1	312.9	0.05648	100.6013	P12:230:UMZW:# 738 #: FT IN SD. FT-FR LINE FAULT
25SP	16ALL	0	TO->FROM	G16_035	FT RANDAL - LAKE PLATT 230KV CKT 1	312.8	0.05409	101.2715	P12:230:UMZW:# 738 #: FT IN SD. FT-FR LINE FAULT
20SP	16ALL	0	TO->FROM	G16_035	FT RANDAL - LAKE PLATT 230KV CKT 1	313	0.05385	100.5254	P12:230:UMZW:# 738 #: FT IN SD. FT-FR LINE FAULT
17SP	16ALL	2	FROM->TO	G16_035	FT THOMPSON - LAKE PLATT 230KV CKT 1	351.6	0.06399	104.7369	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z
17SP	16ALL	2	FROM->TO	G16_035	FT THOMPSON - LAKE PLATT 230KV CKT 1	351.6	0.06399	104.7369	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1
17SP	16ALL	2	FROM->TO	G16_035	FT THOMPSON - LAKE PLATT 230KV CKT 1	351.6	0.06399	103.0305	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z
17SP	16ALL	2	FROM->TO	G16_035	FT THOMPSON - LAKE PLATT 230KV CKT 1	351.6	0.06399	102.8883	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1
17SP	16ALL	2	FROM->TO	G16_035	FT THOMPSON - LAKE PLATT 230KV CKT 1	351.6	0.06399	100.3854	FT THOMPSON - FTTHOM2-LNX3345.00 345KV CKT Z
17SP	16ALL	2	FROM->TO	G16_035	FT THOMPSON - LAKE PLATT 230KV CKT 1	351.6	0.06399	100.0157	GRPRAR2-LNX3345.00 - YANKTON 345KV CKT Z
17SP	16ALL	2	FROM->TO	G16_035	FT THOMPSON - LAKE PLATT 230KV CKT 1	351.6	0.06399	100.0157	FTTHOM2-LNX3345.00 - GRPRAR2-LNX3345.00 345KV CKT 1
17SP	16ALL	2	FROM->TO	G16_035	FT THOMPSON - LAKE PLATT 230KV CKT 1	351.6	0.06371	107.8521	P12:230:UMZW:# 738 #: FT IN SD. FT-FR LINE FAULT
17SP	16ALL	0	FROM->TO	G16_035	FT THOMPSON - LAKE PLATT 230KV CKT 1	351.6	0.0609	107.8029	P12:230:UMZW:# 738 #: FT IN SD. FT-FR LINE FAULT
17SP	16ALL	0	FROM->TO	G16_035	FT THOMPSON - LAKE PLATT 230KV CKT 1	351.6	0.06088	104.7939	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1
17SP	16ALL	0	FROM->TO	G16_035	FT THOMPSON - LAKE PLATT 230KV CKT 1	351.6	0.06088	104.7939	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z
17SP	16ALL	0	FROM->TO	G16_035	FT THOMPSON - LAKE PLATT 230KV CKT 1	351.6	0.06088	103.059	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z
17SP	16ALL	0	FROM->TO	G16_035	FT THOMPSON - LAKE PLATT 230KV CKT 1	351.6	0.06088	102.9168	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1
17SP	16ALL	0	FROM->TO	G16_035	FT THOMPSON - LAKE PLATT 230KV CKT 1	351.6	0.06088	100.414	FT THOMPSON - FTTHOM2-LNX3345.00 345KV CKT Z
17SP	16ALL	0	FROM->TO	G16_035	FT THOMPSON - LAKE PLATT 230KV CKT 1	351.6	0.06088	100.0442	FTTHOM2-LNX3345.00 - GRPRAR2-LNX3345.00 345KV CKT 1
17SP	16ALL	0	FROM->TO	G16_035	FT THOMPSON - LAKE PLATT 230KV CKT 1	351.6	0.06088	100.0442	GRPRAR2-LNX3345.00 - YANKTON 345KV CKT Z
17SP	16ALL	2	TO->FROM	G16_035	G09_001IST 345.00 - GROTON 345KV CKT 1	784.5	0.10485	101.1744	RIEL - ROSEAU 500KV CKT 1
17SP	16ALL	2	TO->FROM	G16_035	G09_001IST 345.00 - GROTON 345KV CKT 1	784.5	0.10485	100.843	ROSEAU - ROSEAU 2 500.00 500KV CKT 1
17SP	16ALL	2	TO->FROM	G16_035	G09_001IST 345.00 - GROTON 345KV CKT 1	784.5	0.10485	100.843	ROSEAU - ROSEAU 2 500.00 500KV CKT 1
17SP	16ALL	2	TO->FROM	G16_035	G09_001IST 345.00 - GROTON 345KV CKT 1	784.5	0.10485	100.4988	FORBES - ROSEAU 500KV CKT 1
17SP	16ALL	0	TO->FROM	G16_035	G09_001IST 345.00 - GROTON 345KV CKT 1	784.5	0.09929	101.1154	RIEL - ROSEAU 500KV CKT 1
17SP	16ALL	0	TO->FROM	G16_035	G09_001IST 345.00 - GROTON 345KV CKT 1	784.5	0.09929	100.7839	ROSEAU - ROSEAU 2 500.00 500KV CKT 1
17SP	16ALL	0	TO->FROM	G16_035	G09_001IST 345.00 - GROTON 345KV CKT 1	784.5	0.09929	100.7839	ROSEAU - ROSEAU 2 500.00 500KV CKT 1
17SP	16ALL	0	TO->FROM	G16_035	G09_001IST 345.00 - GROTON 345KV CKT 1	784.5	0.09929	100.4525	FORBES - ROSEAU 500KV CKT 1
17SP	16ALL	2	FROM->TO	G16_035	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	779.4	0.11972	100.519	G16-017-TAP 345.00 - G16035-TAPII345.00 345KV CKT 1
17SP	16ALL	2	FROM->TO	G16_035	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	779.4	0.11972	100.4934	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1
17SP	16ALL	2	FROM->TO	G16_035	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	779.4	0.11972	100.4934	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z
17SP	16ALL	2	FROM->TO	G16_035	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	779.4	0.11026	100.529	P12:345:UMZB:# 103 #: BD IN SD. LOSS OF LINE
17SP	16ALL	2	FROM->TO	G16_035	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	779.4	0.11026	100.529	P12:345:UMZB:# 102 #: AVS BD IN ND. AVS BRD LR
17SP	16ALL	2	FROM->TO	G16_035	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	779.4	0.11026	100.3237	P13:345:UMZB:# 244 #: BD IN SD. LOSS OF TX
17SP	16ALL	2	FROM->TO	G16_035	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	779.4	0.11026	100.5033	ANTELOP-LNX3345.00 - ANTELOPE VALLEY 345KV CKT Z
17SP	16ALL	2	FROM->TO	G16_035	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	779.4	0.11026	100.3237	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
17SP	16ALL	2	FROM->TO	G16_035	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	779.4	0.11026	100.3237	BRDLAND-LNX3345.00 - HURON 345KV CKT Z
17SP	16ALL	2	FROM->TO	G16_035	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	779.4	0.11026	100.3237	ANTELOP-LNX3345.00 - BRDLAND-LNX3345.00 345KV CKT 1
17SP	16ALL	2	FROM->TO	G16_035	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	779.4	0.11026	100.2981	BROADLAND - HURON 230KV CKT 1
17SP	16ALL	0	FROM->TO	G16_035	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	779.3	0.10768	101.9219	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT
17SP	16ALL	2	FROM->TO	G16_035	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	779.4	0.10768	101.6394	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT
17SP	16ALL	0	FROM->TO	G16_035	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	779.3	0.10768	101.8706	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
17SP	16ALL	0	FROM->TO	G16_035	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	779.3	0.10768	101.5626	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
17SP	16ALL	0	FROM->TO	G16_035	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	779.3	0.10768	101.5241	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1
17SP	16ALL	0	FROM->TO	G16_035	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	779.3	0.10768	101.5241	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z
17SP	16ALL	2	FROM->TO	G16_035	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	779.4	0.10485	106.2373	RIEL - ROSEAU 500KV CKT 1
17SP	16ALL	2	FROM->TO	G16_035	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	779.4	0.10485	105.9037	ROSEAU - ROSEAU 2 500.00 500KV CKT 1
17SP	16ALL	2	FROM->TO	G16_035	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	779.4	0.10485	105.9037	ROSEAU - ROSEAU 2 500.00 500KV CKT 1
17SP	16ALL	2	FROM->TO	G16_035	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	779.4	0.10485	105.5573	FORBES - ROSEAU 500KV CKT 1
17SP	16ALL	0	FROM->TO	G16_035	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	779.3	0.10353	100.6169	P12:345:UMZB:# 103 #: BD IN SD. LOSS OF LINE
17SP	16ALL	0	FROM->TO	G16_035	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	779.3	0.10353	100.6169	P12:345:UMZB:# 102 #: AVS BD IN ND. AVS BRD LR
17SP	16ALL	0	FROM->TO	G16_035	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	779.3	0.10353	100.4116	P13:345:UMZB:# 244 #: BD IN SD. LOSS OF TX

SEASON	GROUP	SCENARIO	DIRECTION	SOURCE	MONITORED ELEMENT	RATE (MVA)	TDF	CONTINGENCY LOADING %	CONTINGENCY
17SP	16ALL	0	FROM->TO	G16_035	G09_0011ST 345.00 - WATERTOWN 345KV CKT 1	779.3	0.10353	100.5912	ANTELOP-LNX3345.00 - ANTELOPE VALLEY 345KV CKT Z
17SP	16ALL	0	FROM->TO	G16_035	G09_0011ST 345.00 - WATERTOWN 345KV CKT 1	779.3	0.10353	100.4116	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
17SP	16ALL	0	FROM->TO	G16_035	G09_0011ST 345.00 - WATERTOWN 345KV CKT 1	779.3	0.10353	100.4116	ANTELOP-LNX3345.00 - BRDLAND-LNX3345.00 345KV CKT 1
17SP	16ALL	0	FROM->TO	G16_035	G09_0011ST 345.00 - WATERTOWN 345KV CKT 1	779.3	0.10353	100.4116	BRDLAND-LNX3345.00 - HURON 345KV CKT Z
17SP	16ALL	0	FROM->TO	G16_035	G09_0011ST 345.00 - WATERTOWN 345KV CKT 1	779.3	0.10353	100.3859	BROADLAND - HURON 230KV CKT 1
17SP	16ALL	0	FROM->TO	G16_035	G09_0011ST 345.00 - WATERTOWN 345KV CKT 1	779.3	0.09929	106.1914	RIEL - ROSEAU 500KV CKT 1
17SP	16ALL	0	FROM->TO	G16_035	G09_0011ST 345.00 - WATERTOWN 345KV CKT 1	779.3	0.09929	105.8578	ROSEAU - ROSEAU 2 500.00 500KV CKT 1
17SP	16ALL	0	FROM->TO	G16_035	G09_0011ST 345.00 - WATERTOWN 345KV CKT 1	779.3	0.09929	105.8578	ROSEAU - ROSEAU 2 500.00 500KV CKT 1
17SP	16ALL	0	FROM->TO	G16_035	G09_0011ST 345.00 - WATERTOWN 345KV CKT 1	779.3	0.09929	105.5114	FORBES - ROSEAU 500KV CKT 1
17SP	16ALL	0	TO->FROM	G16_035	G13_0011ST 115.00 - SUMMIT 115KV CKT 1	118.7	0.03044	162.337	G09_0011ST 345.00 - WATERTOWN 345KV CKT 1
17SP	16ALL	0	TO->FROM	G16_035	G13_0011ST 115.00 - SUMMIT 115KV CKT 1	118.7	0.03044	158.209	G09_0011ST 345.00 - GROTON 345KV CKT 1
17SP	16ALL	2	TO->FROM	G16_035	G13_0011ST 115.00 - SUMMIT 115KV CKT 1	118.7	0.03019	162.2993	G09_0011ST 345.00 - WATERTOWN 345KV CKT 1
17SP	16ALL	2	TO->FROM	G16_035	G13_0011ST 115.00 - SUMMIT 115KV CKT 1	118.7	0.03019	158.087	G09_0011ST 345.00 - GROTON 345KV CKT 1
17G	16ALL	0	TO->FROM	G16_035	G13_0011ST 115.00 - SUMMIT 115KV CKT 1	118.4	0.02997	139.9344	G09_0011ST 345.00 - WATERTOWN 345KV CKT 1
17G	16ALL	0	TO->FROM	G16_035	G13_0011ST 115.00 - SUMMIT 115KV CKT 1	118.4	0.02997	135.5425	G09_0011ST 345.00 - GROTON 345KV CKT 1
17SP	16ALL	0	FROM->TO	G16_035	G13_0011ST 115.00 - WATERTOWN 115KV CKT 1	119.5	0.03044	175.8946	G09_0011ST 345.00 - WATERTOWN 345KV CKT 1
17SP	16ALL	0	FROM->TO	G16_035	G13_0011ST 115.00 - WATERTOWN 115KV CKT 1	119.5	0.03044	171.7942	G09_0011ST 345.00 - GROTON 345KV CKT 1
17SP	16ALL	2	FROM->TO	G16_035	G13_0011ST 115.00 - WATERTOWN 115KV CKT 1	119.5	0.03019	175.7735	G09_0011ST 345.00 - WATERTOWN 345KV CKT 1
17SP	16ALL	2	FROM->TO	G16_035	G13_0011ST 115.00 - WATERTOWN 115KV CKT 1	119.5	0.03019	171.673	G09_0011ST 345.00 - GROTON 345KV CKT 1
17G	16ALL	0	FROM->TO	G16_035	G13_0011ST 115.00 - WATERTOWN 115KV CKT 1	119.2	0.02997	153.7604	G09_0011ST 345.00 - WATERTOWN 345KV CKT 1
17G	16ALL	0	FROM->TO	G16_035	G13_0011ST 115.00 - WATERTOWN 115KV CKT 1	119.2	0.02997	149.3979	G09_0011ST 345.00 - GROTON 345KV CKT 1
20WP	08ALL	0	FROM->TO	G16_033	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	955	0.19489	130.6109	P12:138:OKGE:3TERM2
17G	08ALL	0	FROM->TO	G16_033	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	955.2	0.19479	161.1003	SOONER - SPRING CREEK 345KV CKT 1
17G	08ALL	0	FROM->TO	G16_033	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	955.2	0.19479	160.5035	NORTHWEST - SPRING CREEK 345KV CKT 1
17SP	08ALL	0	FROM->TO	G16_033	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	954.1	0.19422	131.1967	MORISNT4 138.00 - STILLWATER 138KV CKT 1
20WP	08ALL	0	FROM->TO	G16_033	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	955	0.19387	130.6058	MORISNT4 138.00 - STILLWATER 138KV CKT 1
17G	08ALL	0	FROM->TO	G16_033	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	955.2	0.19362	135.9444	P12:138:OKGE:3TERM2
20SP	08ALL	0	FROM->TO	G16_033	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	953.9	0.19318	120.185	G15052_T 345.00 - ROSE HILL 345KV CKT 1
16WP	08ALL	0	FROM->TO	G16_033	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	955	0.19287	164.505	SOONER - SPRING CREEK 345KV CKT 1
16WP	08ALL	0	FROM->TO	G16_033	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	955	0.19287	163.8662	NORTHWEST - SPRING CREEK 345KV CKT 1
17G	08ALL	0	FROM->TO	G16_033	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	955.2	0.19257	135.958	MORISNT4 138.00 - STILLWATER 138KV CKT 1
17SP	08ALL	0	FROM->TO	G16_033	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	954.1	0.19216	129.358	G15052_T 345.00 - ROSE HILL 345KV CKT 1
25SP	08ALL	0	FROM->TO	G16_033	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	954.6	0.19208	134.1867	G15052_T 345.00 - ROSE HILL 345KV CKT 1
16WP	08ALL	0	FROM->TO	G16_033	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	955	0.19197	138.6082	P12:138:OKGE:3TERM2
20SP	08ALL	0	FROM->TO	G16_033	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	953.9	0.19166	120.5284	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1
20SP	08ALL	0	FROM->TO	G16_033	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	953.9	0.19166	119.5582	G16-012-TAP 345.00 - WAVERLY7 345.00 345KV CKT 1
17SP	08ALL	0	FROM->TO	G16_010A	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	954.1	0.19127	153.9061	SOONER - SPRING CREEK 345KV CKT 1
20SP	08ALL	0	FROM->TO	G16_033	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	953.9	0.19107	119.627	CANEYRV7 345.00 - NEOSHO 345KV CKT 1
16WP	08ALL	0	FROM->TO	G16_033	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	955	0.19093	138.6135	MORISNT4 138.00 - STILLWATER 138KV CKT 1
20WP	08ALL	0	FROM->TO	G16_033	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	955	0.19074	127.817	G15052_T 345.00 - ROSE HILL 345KV CKT 1
17SP	08ALL	0	FROM->TO	G16_010A	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	954.1	0.19056	160.8771	NORTHWEST - SPRING CREEK 345KV CKT 1
17SP	08ALL	0	FROM->TO	G16_033	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	954.1	0.19055	130.1007	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1
17SP	08ALL	0	FROM->TO	G16_033	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	954.1	0.19055	129.1575	G16-012-TAP 345.00 - WAVERLY7 345.00 345KV CKT 1
17SP	08ALL	0	FROM->TO	G16_010A	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	954.1	0.19045	144.0276	CLEVELAND - G15066_T 345.00 345KV CKT 1
17SP	08ALL	0	FROM->TO	G16_010A	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	954.1	0.19045	139.8562	G15066_T 345.00 - SOONER 345KV CKT 1
17G	08ALL	0	FROM->TO	G16_033	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	955.2	0.19009	134.4025	G15052_T 345.00 - ROSE HILL 345KV CKT 1
17SP	08ALL	0	FROM->TO	G16_033	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	954.1	0.19003	129.3406	CANEYRV7 345.00 - NEOSHO 345KV CKT 1
17SP	08ALL	0	FROM->TO	G16_010A	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	955.2	0.18952	149.2317	CLEVELAND - G15066_T 345.00 345KV CKT 1
17G	08ALL	0	FROM->TO	G16_010A	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	955.2	0.18952	145.065	G15066_T 345.00 - SOONER 345KV CKT 1
20WP	08ALL	0	FROM->TO	G16_033	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	955	0.18951	129.8245	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1
20WP	08ALL	0	FROM->TO	G16_033	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	955	0.18951	128.8659	G16-012-TAP 345.00 - WAVERLY7 345.00 345KV CKT 1
20WP	08ALL	0	FROM->TO	G16_033	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	955	0.18951	127.8711	WAVERLY7 345.00 - WOLF CREEK 345KV CKT 1
17G	08ALL	0	FROM->TO	G16_033	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	955.2	0.189	136.0685	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1
17G	08ALL	0	FROM->TO	G16_033	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	955.2	0.189	135.1346	G16-012-TAP 345.00 - WAVERLY7 345.00 345KV CKT 1
17G	08ALL	0	FROM->TO	G16_033	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	955.2	0.189	134.1714	WAVERLY7 345.00 - WOLF CREEK 345KV CKT 1

SEASON	GROUP	SCENARIO	DIRECTION	SOURCE	MONITORED ELEMENT	RATE		CONTINGENCY		CONTINGENCY
						(MVA)	TDF	LOADING %		
20WP	08ALL	0	FROM->TO	G16_033	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	955	0.18891	128.2749	CANEYRV7 345.00 - NEOSHO 345KV CKT 1	
20SP	08ALL	0	FROM->TO	G16_033	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	953.9	0.18874	119.193	CANEYRV7 345.00 - NEOSHO 345KV CKT 1	
20SP	08ALL	0	FROM->TO	G16_033	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	953.9	0.18874	119.2298	SEMINOLE 345/20.9KV TRANSFORMER CKT 1	
17G	08ALL	0	FROM->TO	G16_033	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	955.2	0.18872	134.8498	CANEYRV7 345.00 - NEOSHO 345KV CKT 1	
16WP	08ALL	0	FROM->TO	G16_033	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	955	0.18869	136.7155	G15052_T 345.00 - ROSE HILL 345KV CKT 1	
20SP	08ALL	0	FROM->TO	G16_033	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	953.9	0.18868	122.9997	DBL-THIS-G1524	
17SP	08ALL	0	FROM->TO	G16_033	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	954.1	0.18846	131.9746	DBL-THIS-G1524	
17SP	08ALL	0	FROM->TO	G16_010A	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	954.1	0.18833	131.2952	WOODRING (WOODRNG2) 345/138/13.8KV TRANSFORMER CKT 1	
17G	08ALL	0	FROM->TO	G16_010A	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	955.2	0.18814	161.1003	SOONER - SPRING CREEK 345KV CKT 1	
17G	08ALL	0	FROM->TO	G16_010A	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	955.2	0.18814	160.5035	NORTHWEST - SPRING CREEK 345KV CKT 1	
16WP	08ALL	0	FROM->TO	G16_010A	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	955	0.18807	151.141	CLEVELAND - G15066_T 345.00 345KV CKT 1	
16WP	08ALL	0	FROM->TO	G16_010A	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	955	0.18807	146.963	G15066_T 345.00 - SOONER 345KV CKT 1	
25SP	08ALL	0	FROM->TO	G16_033	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	954.6	0.18761	133.8361	SEMINOLE 345/20.9KV TRANSFORMER CKT 1	
25SP	08ALL	0	FROM->TO	G16_033	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	954.6	0.18761	133.7523	SEMINOLE 345/20.9KV TRANSFORMER CKT 1	
25SP	08ALL	0	FROM->TO	G16_033	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	954.6	0.18761	133.6161	G15052_T 345.00 - ROSE HILL 345KV CKT 1	
25SP	08ALL	0	FROM->TO	G16_033	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	954.6	0.18761	133.6744	SEMINOLE 138/20.9KV TRANSFORMER CKT 1	
25SP	08ALL	0	FROM->TO	G16_033	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	954.6	0.18761	133.5868	SEMINOLE 345/20.9KV TRANSFORMER CKT 1	
25SP	08ALL	0	FROM->TO	G16_033	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	954.6	0.18761	133.4513	SEMINOLE 345/17.1KV TRANSFORMER CKT 1	
16WP	08ALL	0	FROM->TO	G16_033	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	955	0.18748	137.8399	G16-012-TAP 345.00 - WAVERLY7 345.00 345KV CKT 1	
16WP	08ALL	0	FROM->TO	G16_033	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	955	0.18748	138.7718	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	
16WP	08ALL	0	FROM->TO	G16_033	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	955	0.18748	136.8766	WAVERLY7 345.00 - WOLF CREEK 345KV CKT 1	
17G	08ALL	0	FROM->TO	G16_010A	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	955.2	0.18742	134.1315	WOODRING (WOODRNG2) 345/138/13.8KV TRANSFORMER CKT 1	
16WP	08ALL	0	FROM->TO	G16_033	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	955	0.18708	137.3249	CANEYRV7 345.00 - NEOSHO 345KV CKT 1	
25SP	08ALL	0	FROM->TO	G16_033	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	954.6	0.1869	142.5944	DBL-THIS-G1524	
17SP	08ALL	0	FROM->TO	G16_010A	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	954.1	0.18682	128.1325	RENFROW7 345.00 (BANK 1) 345/138/13.8KV TRANSFORMER CKT 1	
16WP	08ALL	0	FROM->TO	G16_010A	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	955	0.1862	164.505	SOONER - SPRING CREEK 345KV CKT 1	
16WP	08ALL	0	FROM->TO	G16_010A	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	955	0.1862	163.8662	NORTHWEST - SPRING CREEK 345KV CKT 1	
16WP	08ALL	0	FROM->TO	G16_010A	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	955	0.18557	136.585	WOODRING (WOODRNG2) 345/138/13.8KV TRANSFORMER CKT 1	
20L	08ALL	0	FROM->TO	G16_033	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	954.9	0.18556	146.7502	CLEVELAND - G15066_T 345.00 345KV CKT 1	
20L	08ALL	0	FROM->TO	G16_033	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	954.9	0.18556	142.6241	G15066_T 345.00 - SOONER 345KV CKT 1	
17SP	08ALL	0	FROM->TO	G16_010A	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	954.1	0.1851	135.6247	P12:345:AEPW-GRDA:T.NO.-7:CLEVLND7	
17G	08ALL	0	FROM->TO	G16_010A	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	955.2	0.18402	141.5505	P12:345:AEPW-GRDA:T.NO.-7:CLEVLND7	
25SP	08ALL	0	FROM->TO	G16_033	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	954.6	0.18383	133.1067	P12:345:SPS:WALKEMEYER-HITCHLAND	
25SP	08ALL	0	FROM->TO	G16_033	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	954.6	0.18383	133.1067	P12:345:SPS:J07.1.FINN.HITCH	
20SP	08ALL	0	FROM->TO	G16_010A	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	953.9	0.18343	122.9997	DBL-THIS-G1524	
20L	08ALL	0	FROM->TO	G16_033	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	954.9	0.18264	138.6099	P12:345:AEPW-GRDA:T.NO.-7:CLEVLND7	
16WP	08ALL	0	FROM->TO	G16_010A	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	955	0.18252	143.4449	P12:345:AEPW-GRDA:T.NO.-7:CLEVLND7	
17SP	08ALL	0	FROM->TO	G16_033	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	954.1	0.18217	128.3281	RENFROW4 138.00 - RENFROW4 138.00 138KV CKT 1	
25SP	08ALL	0	FROM->TO	G16_010A	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	954.6	0.18166	142.5944	DBL-THIS-G1524	
17SP	08ALL	0	FROM->TO	G16_010A	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	954.1	0.1795	129.3406	CANEYRV7 345.00 - NEOSHO 345KV CKT 1	
20L	08ALL	0	FROM->TO	G16_033	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	954.9	0.17941	131.5964	P12:138:OKGE:3TERM2	
17SP	08ALL	0	FROM->TO	G16_010A	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	954.1	0.17927	133.398	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	
17SP	08ALL	0	FROM->TO	G16_033	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	954.1	0.17904	131.6845	MATHWSN7 345.00 - TATONGA7 345.00 345KV CKT 1	
17G	08ALL	0	FROM->TO	G16_033	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	955.2	0.17898	139.0556	MATHWSN7 345.00 - TATONGA7 345.00 345KV CKT 1	
17G	08ALL	0	FROM->TO	G16_033	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	955.2	0.17898	133.2453	G11_051T 345.00 - TATONGA7 345.00 345KV CKT 1	
17SP	08ALL	0	FROM->TO	G16_010A	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	954.1	0.1788	128.3281	RENFROW4 138.00 - RENFROW4 138.00 138KV CKT 1	
17G	08ALL	0	FROM->TO	G16_010A	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	955.2	0.17856	139.0556	MATHWSN7 345.00 - TATONGA7 345.00 345KV CKT 1	
17G	08ALL	0	FROM->TO	G16_010A	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	955.2	0.17856	133.2453	G11_051T 345.00 - TATONGA7 345.00 345KV CKT 1	
17SP	08ALL	0	FROM->TO	G16_010A	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	954.1	0.17854	131.6845	MATHWSN7 345.00 - TATONGA7 345.00 345KV CKT 1	
17SP	08ALL	0	FROM->TO	G16_010A	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	954.1	0.17851	130.1007	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	
17SP	08ALL	0	FROM->TO	G16_010A	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	954.1	0.17851	129.1575	G16-012-TAP 345.00 - WAVERLY7 345.00 345KV CKT 1	
17G	08ALL	0	FROM->TO	G16_010A	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	955.2	0.17836	134.8498	CANEYRV7 345.00 - NEOSHO 345KV CKT 1	
20L	08ALL	0	FROM->TO	G16_033	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	954.9	0.17831	131.5608	MORISNT4 138.00 - STILLWATER 138KV CKT 1	
17SP	08ALL	0	FROM->TO	G16_033	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	954.1	0.17826	128.1325	RENFROW7 345.00 (BANK 1) 345/138/13.8KV TRANSFORMER CKT 1	
17G	08ALL	0	FROM->TO	G16_010A	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	955.2	0.17796	138.8541	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	

SEASON	GROUP	SCENARIO	DIRECTION	SOURCE	MONITORED ELEMENT	RATE		CONTINGENCY		CONTINGENCY
						(MVA)	TDF	LOADING %		
17G	08ALL	0	FROM->TO	G16_010A	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	955.2	0.17796	132.7555	MARSHALL - WOODRING 138KV CKT 1	
17G	08ALL	0	FROM->TO	G16_010A	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	955.2	0.17796	132.6404	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	
17SP	08ALL	0	FROM->TO	G16_010A	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	954.1	0.17784	128.941	P12:138:OKGE:3TERM1	
17SP	08ALL	0	FROM->TO	G16_010A	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	954.1	0.17784	128.8674	WAUKOMIS - WAUKOMIS TAP 138KV CKT 1	
17SP	08ALL	0	FROM->TO	G16_010A	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	954.1	0.17775	131.1681	P12:138:OKGE:3TERM2	
17SP	08ALL	0	FROM->TO	G16_010A	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	954.1	0.17768	131.1967	MORISNT4 138.00 - STILLWATER 138KV CKT 1	
17G	08ALL	0	FROM->TO	G16_010A	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	955.2	0.17713	136.0685	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	
17G	08ALL	0	FROM->TO	G16_010A	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	955.2	0.17713	135.1346	G16-012-TAP 345.00 - WAVERLY7 345.00 345KV CKT 1	
17G	08ALL	0	FROM->TO	G16_010A	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	955.2	0.17713	134.1714	WAVERLY7 345.00 - WOLF CREEK 345KV CKT 1	
16WP	08ALL	0	FROM->TO	G16_010A	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	955	0.1767	137.3249	CANEYRV7 345.00 - NEOSHO 345KV CKT 1	
17G	08ALL	0	FROM->TO	G16_010A	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	955.2	0.17642	134.158	P12:138:OKGE:3TERM1	
25SP	08ALL	0	FROM->TO	G16_010A	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	954.6	0.17636	140.7613	DBL-THIS-WWRD	
20SP	08ALL	0	FROM->TO	G16_033	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	953.9	0.17633	122.9922	DBL-TGA-MATT	
17G	08ALL	0	FROM->TO	G16_010A	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	955.2	0.17628	135.9444	P12:138:OKGE:3TERM2	
16WP	08ALL	0	FROM->TO	G16_033	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	955	0.17624	142.1286	MATHWSN7 345.00 - TATONGA7 345.00 345KV CKT 1	
16WP	08ALL	0	FROM->TO	G16_033	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	955	0.17624	136.9245	G11_051T 345.00 - TATONGA7 345.00 345KV CKT 1	
16WP	08ALL	0	FROM->TO	G16_033	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	955	0.17624	135.3014	G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1	
17G	08ALL	0	FROM->TO	G16_010A	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	955.2	0.1762	135.958	MORISNT4 138.00 - STILLWATER 138KV CKT 1	
16WP	08ALL	0	FROM->TO	G16_010A	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	955	0.17614	141.4829	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	
16WP	08ALL	0	FROM->TO	G16_010A	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	955	0.17614	135.3935	MARSHALL - WOODRING 138KV CKT 1	
16WP	08ALL	0	FROM->TO	G16_010A	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	955	0.17614	135.2783	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	
16WP	08ALL	0	FROM->TO	G16_010A	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	955	0.1758	142.1286	MATHWSN7 345.00 - TATONGA7 345.00 345KV CKT 1	
16WP	08ALL	0	FROM->TO	G16_010A	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	955	0.1758	136.9245	G11_051T 345.00 - TATONGA7 345.00 345KV CKT 1	
16WP	08ALL	0	FROM->TO	G16_010A	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	955	0.1758	135.3014	G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1	
20L	08ALL	0	FROM->TO	G16_033	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	954.9	0.17575	132.0101	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	
20L	08ALL	0	FROM->TO	G16_033	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	954.9	0.17575	131.0618	G16-012-TAP 345.00 - WAVERLY7 345.00 345KV CKT 1	
20L	08ALL	0	FROM->TO	G16_033	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	954.9	0.17575	130.0774	WAVERLY7 345.00 - WOLF CREEK 345KV CKT 1	
16WP	08ALL	0	FROM->TO	G16_010A	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	955	0.1756	137.8399	G16-012-TAP 345.00 - WAVERLY7 345.00 345KV CKT 1	
16WP	08ALL	0	FROM->TO	G16_010A	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	955	0.1756	138.7718	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	
16WP	08ALL	0	FROM->TO	G16_010A	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	955	0.1756	136.8766	WAVERLY7 345.00 - WOLF CREEK 345KV CKT 1	
20L	08ALL	0	FROM->TO	G16_033	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	954.9	0.17531	151.3705	SOONER - SPRING CREEK 345KV CKT 1	
20L	08ALL	0	FROM->TO	G16_033	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	954.9	0.17531	150.8993	NORTHWEST - SPRING CREEK 345KV CKT 1	
20L	08ALL	0	FROM->TO	G16_033	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	954.9	0.17502	130.5129	CANEYRV7 345.00 - NEOSHO 345KV CKT 1	
20L	08ALL	0	FROM->TO	G16_033	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	954.9	0.17502	129.2981	CANEYRV7 345.00 - LATHAM57 345.00 345KV CKT 1	
20SP	08ALL	0	FROM->TO	G16_010A	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	953.9	0.17483	141.6865	SOONER - SPRING CREEK 345KV CKT 1	
25SP	08ALL	0	FROM->TO	G16_033	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	954.6	0.1747	140.7613	DBL-THIS-WWRD	
16WP	08ALL	0	FROM->TO	G16_010A	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	955	0.17462	138.6082	P12:138:OKGE:3TERM2	
16WP	08ALL	0	FROM->TO	G16_010A	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	955	0.17454	138.6135	MORISNT4 138.00 - STILLWATER 138KV CKT 1	
20SP	08ALL	0	FROM->TO	G16_010A	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	953.9	0.17412	148.5729	NORTHWEST - SPRING CREEK 345KV CKT 1	
25SP	08ALL	0	FROM->TO	G16_010A	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	954.6	0.17328	160.7614	SOONER - SPRING CREEK 345KV CKT 1	
20L	08ALL	0	FROM->TO	G16_033	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	954.9	0.17308	132.8722	DBL-THIS-G1524	
20SP	08ALL	0	FROM->TO	G16_010A	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	953.9	0.17306	134.4556	CLEVELAND - G15066_T 345.00 345KV CKT 1	
20SP	08ALL	0	FROM->TO	G16_010A	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	953.9	0.17306	130.2728	G15066_T 345.00 - SOONER 345KV CKT 1	
20WP	08ALL	0	FROM->TO	G16_033	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	955	0.17278	138.2039	DBL-TGA-MATT	
20WP	08ALL	0	FROM->TO	G16_033	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	955	0.17278	132.9682	DBL-G1151-TGA	
20WP	08ALL	0	FROM->TO	G16_033	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	955	0.17278	131.3452	DBL-WWRD-G1151	
25SP	08ALL	0	FROM->TO	G16_010A	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	954.6	0.17259	167.5214	NORTHWEST - SPRING CREEK 345KV CKT 1	
25SP	08ALL	0	FROM->TO	G16_010A	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	954.6	0.17238	146.0428	CLEVELAND - G15066_T 345.00 345KV CKT 1	
25SP	08ALL	0	FROM->TO	G16_010A	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	954.6	0.17238	141.8212	G15066_T 345.00 - SOONER 345KV CKT 1	
17SP	08ALL	0	FROM->TO	G16_010A	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	954.1	0.17233	129.358	G15052_T 345.00 - ROSE HILL 345KV CKT 1	
20WP	08ALL	0	FROM->TO	G16_010A	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	955	0.17095	152.6692	SOONER - SPRING CREEK 345KV CKT 1	
20WP	08ALL	0	FROM->TO	G16_010A	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	955	0.17095	152.1352	NORTHWEST - SPRING CREEK 345KV CKT 1	
20WP	08ALL	0	FROM->TO	G16_010A	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	955	0.17093	142.5591	CLEVELAND - G15066_T 345.00 345KV CKT 1	
20WP	08ALL	0	FROM->TO	G16_010A	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	955	0.17093	138.3706	G15066_T 345.00 - SOONER 345KV CKT 1	
17G	08ALL	0	FROM->TO	G16_010A	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	955.2	0.17044	134.4025	G15052_T 345.00 - ROSE HILL 345KV CKT 1	

SEASON	GROUP	SCENARIO	DIRECTION	SOURCE	MONITORED ELEMENT	RATE		CONTINGENCY		CONTINGENCY
						(MVA)	TDF	LOADING %		
20SP	08ALL	0	FROM->TO	G16_010A	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	953.9	0.17023	122.1369	WOODRING (WOODRNG2) 345/138/13.8KV TRANSFORMER CKT 1	
25SP	08ALL	0	FROM->TO	G16_010A	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	954.6	0.16908	136.754	WOODRING (WOODRNG2) 345/138/13.8KV TRANSFORMER CKT 1	
16WP	08ALL	0	FROM->TO	G16_010A	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	955	0.16903	136.7155	G15052_T 345.00 - ROSE HILL 345KV CKT 1	
20WP	08ALL	0	FROM->TO	G16_010A	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	955	0.16813	128.188	WOODRING (WOODRNG2) 345/138/13.8KV TRANSFORMER CKT 1	
20SP	08ALL	0	FROM->TO	G16_010A	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	953.9	0.16788	125.9229	P12:345:AEPW-GRDA:T.NO.-7:CLEVLND7	
20L	08ALL	0	FROM->TO	G16_010A	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	954.9	0.16783	132.8722	DBL-THIS-G1524	
25SP	08ALL	0	FROM->TO	G16_010A	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	954.6	0.16706	138.3734	P12:345:AEPW-GRDA:T.NO.-7:CLEVLND7	
20WP	08ALL	0	FROM->TO	G16_010A	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	955	0.16573	134.4715	P12:345:AEPW-GRDA:T.NO.-7:CLEVLND7	
20SP	08ALL	0	FROM->TO	G16_010A	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	953.9	0.1651	122.9922	DBL-TGA-MATT	
20SP	08ALL	0	FROM->TO	G16_010A	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	953.9	0.16325	119.627	CANEYRV7 345.00 - NEOSHO 345KV CKT 1	
20L	08ALL	0	FROM->TO	G16_010A	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	954.9	0.16318	131.6326	DBL-THIS-WWRD	
20L	08ALL	0	FROM->TO	G16_033	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	954.9	0.16302	139.8051	DBL-TGA-MATT	
20L	08ALL	0	FROM->TO	G16_033	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	954.9	0.16302	132.4745	DBL-G1151-TGA	
20L	08ALL	0	FROM->TO	G16_033	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	954.9	0.16302	130.8408	DBL-WWRD-G1151	
20SP	08ALL	0	FROM->TO	G16_010A	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	953.9	0.16239	123.3999	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	
20SP	08ALL	0	FROM->TO	G16_010A	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	953.9	0.16234	120.5284	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	
20SP	08ALL	0	FROM->TO	G16_010A	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	953.9	0.16234	119.5582	G16-012-TAP 345.00 - WAVERLY7 345.00 345KV CKT 1	
20SP	08ALL	0	FROM->TO	G16_010A	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	953.9	0.16171	122.3516	P12:138:OKGE:3TERM2	
20SP	08ALL	0	FROM->TO	G16_010A	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	953.9	0.16167	122.3824	MORISNT4 138.00 - STILLWATER 138KV CKT 1	
20WP	08ALL	0	FROM->TO	G16_010A	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	955	0.16154	138.2039	DBL-TGA-MATT	
20WP	08ALL	0	FROM->TO	G16_010A	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	955	0.16154	132.9682	DBL-G1151-TGA	
20WP	08ALL	0	FROM->TO	G16_010A	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	955	0.16154	131.3452	DBL-WWRD-G1151	
20L	08ALL	0	FROM->TO	G16_033	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	954.9	0.16151	131.6326	DBL-THIS-WWRD	
20SP	08ALL	0	FROM->TO	G16_010A	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	953.9	0.16115	119.3674	P12:138:OKGE:3TERM1	
20WP	08ALL	0	FROM->TO	G16_010A	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	955	0.16109	128.2749	CANEYRV7 345.00 - NEOSHO 345KV CKT 1	
25SP	08ALL	0	FROM->TO	G16_010A	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	954.6	0.16066	136.4609	P12:138:OKGE:3TERM2	
25SP	08ALL	0	FROM->TO	G16_010A	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	954.6	0.16062	136.4999	MORISNT4 138.00 - STILLWATER 138KV CKT 1	
20WP	08ALL	0	FROM->TO	G16_010A	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	955	0.16018	129.8245	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	
20WP	08ALL	0	FROM->TO	G16_010A	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	955	0.16018	128.8659	G16-012-TAP 345.00 - WAVERLY7 345.00 345KV CKT 1	
20WP	08ALL	0	FROM->TO	G16_010A	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	955	0.16018	127.8711	WAVERLY7 345.00 - WOLF CREEK 345KV CKT 1	
20WP	08ALL	0	FROM->TO	G16_010A	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	955	0.15997	132.1636	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	
20WP	08ALL	0	FROM->TO	G16_010A	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	955	0.15923	130.6109	P12:138:OKGE:3TERM2	
20WP	08ALL	0	FROM->TO	G16_010A	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	955	0.15917	130.6058	MORISNT4 138.00 - STILLWATER 138KV CKT 1	
20WP	08ALL	0	FROM->TO	G16_010A	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	955	0.15882	127.6928	P12:138:OKGE:3TERM1	
20WP	08ALL	0	FROM->TO	G16_010A	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	955	0.15882	127.6402	WAUKOMIS - WAUKOMIS TAP 138KV CKT 1	
20SP	08ALL	0	FROM->TO	G16_010A	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	953.9	0.15807	119.193	CANEYRV7 345.00 - NEOSHO 345KV CKT 1	
20SP	08ALL	0	FROM->TO	G16_010A	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	953.9	0.15807	119.2298	SEMINOLE 345/20.9KV TRANSFORMER CKT 1	
25SP	08ALL	0	FROM->TO	G16_010A	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	954.6	0.15696	133.8361	SEMINOLE 345/20.9KV TRANSFORMER CKT 1	
25SP	08ALL	0	FROM->TO	G16_010A	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	954.6	0.15696	133.7523	SEMINOLE 345/20.9KV TRANSFORMER CKT 1	
25SP	08ALL	0	FROM->TO	G16_010A	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	954.6	0.15696	133.6161	G15052_T 345.00 - ROSE HILL 345KV CKT 1	
25SP	08ALL	0	FROM->TO	G16_010A	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	954.6	0.15696	133.6744	SEMINOLE 138/20.9KV TRANSFORMER CKT 1	
25SP	08ALL	0	FROM->TO	G16_010A	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	954.6	0.15696	133.5868	SEMINOLE 345/20.9KV TRANSFORMER CKT 1	
25SP	08ALL	0	FROM->TO	G16_010A	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	954.6	0.15696	133.4513	SEMINOLE 345/17.1KV TRANSFORMER CKT 1	
25SP	08ALL	0	FROM->TO	G16_010A	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	954.6	0.15678	133.1067	P12:345:SPS:WALKMEYER-HITCHLAND	
25SP	08ALL	0	FROM->TO	G16_010A	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	954.6	0.15678	133.1067	P12:345:SPS:J07.1.FINN.HITCH	
20SP	08ALL	0	FROM->TO	G16_010A	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	953.9	0.1548	120.185	G15052_T 345.00 - ROSE HILL 345KV CKT 1	
25SP	08ALL	0	FROM->TO	G16_010A	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	954.6	0.15372	134.1867	G15052_T 345.00 - ROSE HILL 345KV CKT 1	
20WP	08ALL	0	FROM->TO	G16_010A	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	955	0.15235	127.817	G15052_T 345.00 - ROSE HILL 345KV CKT 1	
20L	08ALL	0	FROM->TO	G16_010A	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	954.9	0.15179	139.8051	DBL-TGA-MATT	
20L	08ALL	0	FROM->TO	G16_010A	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	954.9	0.15179	132.4745	DBL-G1151-TGA	
20L	08ALL	0	FROM->TO	G16_010A	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	954.9	0.15179	130.8408	DBL-WWRD-G1151	
20L	08ALL	0	FROM->TO	G16_010A	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	954.9	0.15123	146.7502	CLEVELAND - G15066_T 345.00 345KV CKT 1	
20L	08ALL	0	FROM->TO	G16_010A	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	954.9	0.15123	142.6241	G15066_T 345.00 - SOONER 345KV CKT 1	
20L	08ALL	0	FROM->TO	G16_010A	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	954.9	0.15052	151.3705	SOONER - SPRING CREEK 345KV CKT 1	
20L	08ALL	0	FROM->TO	G16_010A	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	954.9	0.15052	150.8993	NORTHWEST - SPRING CREEK 345KV CKT 1	

SEASON	GROUP	SCENARIO	DIRECTION	SOURCE	MONITORED ELEMENT	RATE		CONTINGENCY		CONTINGENCY
						(MVA)	TDF	LOADING %		
20L	08ALL	0	FROM->TO	G16_010A	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	954.9	0.1481	138.6099	P12:345-AEPW-GRDA:T.NO.-7-CLEVLND7	
20L	08ALL	0	FROM->TO	G16_010A	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	954.9	0.14721	130.5129	CANEYRV7 345.00 - NEOSHO 345KV CKT 1	
20L	08ALL	0	FROM->TO	G16_010A	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	954.9	0.14721	129.2981	CANEYRV7 345.00 - LATHAMS7 345.00 345KV CKT 1	
20L	08ALL	0	FROM->TO	G16_010A	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	954.9	0.14643	132.0101	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	
20L	08ALL	0	FROM->TO	G16_010A	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	954.9	0.14643	131.0618	G16-012-TAP 345.00 - WAVERLY7 345.00 345KV CKT 1	
20L	08ALL	0	FROM->TO	G16_010A	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	954.9	0.14643	130.0774	WAVERLY7 345.00 - WOLF CREEK 345KV CKT 1	
20L	08ALL	0	FROM->TO	G16_010A	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	954.9	0.14636	133.9303	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	
20L	08ALL	0	FROM->TO	G16_010A	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	954.9	0.14636	127.9402	MARSHALL - WOODRING 138KV CKT 1	
20L	08ALL	0	FROM->TO	G16_010A	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	954.9	0.14376	131.5964	P12:138:OKGE:3TERM2	
20L	08ALL	0	FROM->TO	G16_010A	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	954.9	0.14362	131.5608	MORISNT4 138.00 - STILLWATER 138KV CKT 1	
20SP	08ALL	0	FROM->TO	G16_010A	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	953.9	0.03292	122.7229	RENFROW7 345.00 - VIOLA 7 345.00 345KV CKT 1	
20L	08NR	0	FROM->TO	G16_033	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	955.8	0.20467	101.1524	DBL-G1151-TGA	
20L	08NR	0	FROM->TO	G16_033	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	955.8	0.20467	108.5389	DBL-TGA-MATT	
17SP	08ALL	0	FROM->TO	G16_010A	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	954.1	0.19779	131.9746	DBL-THIS-G1524	
17G	08ALL	0	TO->FROM	G16_033	G15063_T 345.00 - WOODRING 345KV CKT 1	955.9	0.19479	130.3724	SOONER - SPRING CREEK 345KV CKT 1	
17G	08ALL	0	TO->FROM	G16_033	G15063_T 345.00 - WOODRING 345KV CKT 1	955.9	0.19479	129.7865	NORTHWEST - SPRING CREEK 345KV CKT 1	
17SP	08ALL	0	TO->FROM	G16_033	G15063_T 345.00 - WOODRING 345KV CKT 1	956	0.19422	100.2665	MORISNT4 138.00 - STILLWATER 138KV CKT 1	
17G	08ALL	0	TO->FROM	G16_033	G15063_T 345.00 - WOODRING 345KV CKT 1	955.9	0.19362	105.2454	P12:138:OKGE:3TERM2	
16WP	08ALL	0	TO->FROM	G16_033	G15063_T 345.00 - WOODRING 345KV CKT 1	955.9	0.19287	133.782	SOONER - SPRING CREEK 345KV CKT 1	
16WP	08ALL	0	TO->FROM	G16_033	G15063_T 345.00 - WOODRING 345KV CKT 1	955.9	0.19287	133.1439	NORTHWEST - SPRING CREEK 345KV CKT 1	
17G	08ALL	0	TO->FROM	G16_033	G15063_T 345.00 - WOODRING 345KV CKT 1	955.9	0.19257	105.259	MORISNT4 138.00 - STILLWATER 138KV CKT 1	
25SP	08ALL	0	TO->FROM	G16_033	G15063_T 345.00 - WOODRING 345KV CKT 1	956	0.19208	103.3835	G15052_T 345.00 - ROSE HILL 345KV CKT 1	
16WP	08ALL	0	TO->FROM	G16_033	G15063_T 345.00 - WOODRING 345KV CKT 1	955.9	0.19197	107.9096	P12:138:OKGE:3TERM2	
17SP	08ALL	0	TO->FROM	G16_010A	G15063_T 345.00 - WOODRING 345KV CKT 1	956	0.19127	122.9307	SOONER - SPRING CREEK 345KV CKT 1	
16WP	08ALL	0	TO->FROM	G16_033	G15063_T 345.00 - WOODRING 345KV CKT 1	955.9	0.19093	107.915	MORISNT4 138.00 - STILLWATER 138KV CKT 1	
25SP	08ALL	0	TO->FROM	G16_033	G15063_T 345.00 - WOODRING 345KV CKT 1	956	0.19058	103.6343	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	
17SP	08ALL	0	TO->FROM	G16_010A	G15063_T 345.00 - WOODRING 345KV CKT 1	956	0.19056	129.8879	NORTHWEST - SPRING CREEK 345KV CKT 1	
17SP	08ALL	0	TO->FROM	G16_010A	G15063_T 345.00 - WOODRING 345KV CKT 1	956	0.19045	113.0719	CLEVELAND - G15066_T 345.00 345KV CKT 1	
17SP	08ALL	0	TO->FROM	G16_010A	G15063_T 345.00 - WOODRING 345KV CKT 1	956	0.19045	108.9088	G15066_T 345.00 - SOONER 345KV CKT 1	
17G	08ALL	0	TO->FROM	G16_033	G15063_T 345.00 - WOODRING 345KV CKT 1	955.9	0.19009	103.7046	G15052_T 345.00 - ROSE HILL 345KV CKT 1	
17G	08ALL	0	TO->FROM	G16_010A	G15063_T 345.00 - WOODRING 345KV CKT 1	955.9	0.18952	118.523	CLEVELAND - G15066_T 345.00 345KV CKT 1	
17G	08ALL	0	TO->FROM	G16_010A	G15063_T 345.00 - WOODRING 345KV CKT 1	955.9	0.18952	114.3489	G15066_T 345.00 - SOONER 345KV CKT 1	
17G	08ALL	0	TO->FROM	G16_033	G15063_T 345.00 - WOODRING 345KV CKT 1	955.9	0.189	105.3694	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	
17G	08ALL	0	TO->FROM	G16_033	G15063_T 345.00 - WOODRING 345KV CKT 1	955.9	0.189	104.4258	G16-012-TAP 345.00 - WAVERLY7 345.00 345KV CKT 1	
17G	08ALL	0	TO->FROM	G16_033	G15063_T 345.00 - WOODRING 345KV CKT 1	955.9	0.18872	104.1516	CANEYRV7 345.00 - NEOSHO 345KV CKT 1	
17SP	08ALL	0	TO->FROM	G16_033	G15063_T 345.00 - WOODRING 345KV CKT 1	956	0.18846	101.0429	DBL-THIS-G1524	
17SP	08ALL	0	TO->FROM	G16_010A	G15063_T 345.00 - WOODRING 345KV CKT 1	956	0.18833	100.3648	WOODRING (WOODRNG2) 345/138/13.8KV TRANSFORMER CKT 1	
17G	08ALL	0	TO->FROM	G16_010A	G15063_T 345.00 - WOODRING 345KV CKT 1	955.9	0.18814	130.3724	SOONER - SPRING CREEK 345KV CKT 1	
17G	08ALL	0	TO->FROM	G16_010A	G15063_T 345.00 - WOODRING 345KV CKT 1	955.9	0.18814	129.7865	NORTHWEST - SPRING CREEK 345KV CKT 1	
16WP	08ALL	0	TO->FROM	G16_010A	G15063_T 345.00 - WOODRING 345KV CKT 1	955.9	0.18807	120.4306	CLEVELAND - G15066_T 345.00 345KV CKT 1	
16WP	08ALL	0	TO->FROM	G16_010A	G15063_T 345.00 - WOODRING 345KV CKT 1	955.9	0.18807	116.2566	G15066_T 345.00 - SOONER 345KV CKT 1	
17SP	08ALL	0	TO->FROM	G16_033	G15063_T 345.00 - WOODRING 345KV CKT 1	956	0.18771	106.9972	G15063_1 345.00 - G15063_T 345.00 345KV CKT 1	
17SP	08ALL	0	TO->FROM	G16_033	G15063_T 345.00 - WOODRING 345KV CKT 1	956	0.18771	107.1436	G15063_1 345.00 345/34.5KV TRANSFORMER CKT 1	
17SP	08ALL	0	TO->FROM	G16_033	G15063_T 345.00 - WOODRING 345KV CKT 1	956	0.18771	107.0704	G15063_1 345.00 - G15063_T 345.00 345KV CKT 1	
25SP	08ALL	0	TO->FROM	G16_033	G15063_T 345.00 - WOODRING 345KV CKT 1	956	0.18761	111.7991	G15063_1 345.00 345/34.5KV TRANSFORMER CKT 1	
25SP	08ALL	0	TO->FROM	G16_033	G15063_T 345.00 - WOODRING 345KV CKT 1	956	0.18761	103.0334	P12:138:OKGE:3TERM1	
25SP	08ALL	0	TO->FROM	G16_033	G15063_T 345.00 - WOODRING 345KV CKT 1	956	0.18761	111.8095	G15063_1 345.00 345/34.5KV TRANSFORMER CKT 1	
25SP	08ALL	0	TO->FROM	G16_033	G15063_T 345.00 - WOODRING 345KV CKT 1	956	0.18761	111.7468	G15063_1 345.00 - G15063_T 345.00 345KV CKT 1	
16WP	08ALL	0	TO->FROM	G16_033	G15063_T 345.00 - WOODRING 345KV CKT 1	955.9	0.18748	108.0731	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	
16WP	08ALL	0	TO->FROM	G16_033	G15063_T 345.00 - WOODRING 345KV CKT 1	955.9	0.18748	107.1421	G16-012-TAP 345.00 - WAVERLY7 345.00 345KV CKT 1	
16WP	08ALL	0	TO->FROM	G16_033	G15063_T 345.00 - WOODRING 345KV CKT 1	955.9	0.18748	106.1796	WAVERLY7 345.00 - WOLF CREEK 345KV CKT 1	
17G	08ALL	0	TO->FROM	G16_010A	G15063_T 345.00 - WOODRING 345KV CKT 1	955.9	0.18742	103.4338	WOODRING (WOODRNG2) 345/138/13.8KV TRANSFORMER CKT 1	
16WP	08ALL	0	TO->FROM	G16_033	G15063_T 345.00 - WOODRING 345KV CKT 1	955.9	0.18708	106.638	CANEYRV7 345.00 - NEOSHO 345KV CKT 1	
17G	08ALL	0	TO->FROM	G16_033	G15063_T 345.00 - WOODRING 345KV CKT 1	955.9	0.18694	104.5219	DBL-THIS-G1524	
25SP	08ALL	0	TO->FROM	G16_033	G15063_T 345.00 - WOODRING 345KV CKT 1	956	0.1869	111.7788	DBL-THIS-G1524	

SEASON	GROUP	SCENARIO	DIRECTION	SOURCE	MONITORED ELEMENT	RATE		CONTINGENCY		CONTINGENCY
						(MVA)	TDF	LOADING %		
20WP	08ALL	0	TO->FROM	G16_033	G15063_T 345.00 - WOODRING 345KV CKT 1	956	0.18646	105.6936	G15063_1 345.00 - G15063_T 345.00 345KV CKT 1	
20WP	08ALL	0	TO->FROM	G16_033	G15063_T 345.00 - WOODRING 345KV CKT 1	956	0.18646	105.8296	G15063_1 345.00 345/34.5KV TRANSFORMER CKT 1	
20WP	08ALL	0	TO->FROM	G16_033	G15063_T 345.00 - WOODRING 345KV CKT 1	956	0.18646	105.7668	G15063_1 345.00 - G15063_T 345.00 345KV CKT 1	
17G	08ALL	0	TO->FROM	G16_033	G15063_T 345.00 - WOODRING 345KV CKT 1	955.9	0.18623	112.6746	G15063_1 345.00 345/34.5KV TRANSFORMER CKT 1	
17G	08ALL	0	TO->FROM	G16_033	G15063_T 345.00 - WOODRING 345KV CKT 1	955.9	0.18623	112.6746	G15063_1 345.00 345/34.5KV TRANSFORMER CKT 1	
17G	08ALL	0	TO->FROM	G16_033	G15063_T 345.00 - WOODRING 345KV CKT 1	955.9	0.18623	112.6118	G15063_1 345.00 - G15063_T 345.00 345KV CKT 1	
16WP	08ALL	0	TO->FROM	G16_010A	G15063_T 345.00 - WOODRING 345KV CKT 1	955.9	0.1862	133.782	SOONER - SPRING CREEK 345KV CKT 1	
16WP	08ALL	0	TO->FROM	G16_010A	G15063_T 345.00 - WOODRING 345KV CKT 1	955.9	0.1862	133.1439	NORTHWEST - SPRING CREEK 345KV CKT 1	
16WP	08ALL	0	TO->FROM	G16_010A	G15063_T 345.00 - WOODRING 345KV CKT 1	955.9	0.18557	105.8884	WOODRING (WOODRNG2) 345/138/13.8KV TRANSFORMER CKT 1	
20L	08ALL	0	TO->FROM	G16_033	G15063_T 345.00 - WOODRING 345KV CKT 1	956	0.18556	115.9642	CLEVELAND - G15066_T 345.00 345KV CKT 1	
20L	08ALL	0	TO->FROM	G16_033	G15063_T 345.00 - WOODRING 345KV CKT 1	956	0.18556	111.8428	G15066_T 345.00 - SOONER 345KV CKT 1	
16WP	08ALL	0	TO->FROM	G16_033	G15063_T 345.00 - WOODRING 345KV CKT 1	955.9	0.18554	107.2919	DBL-THIS-G1524	
17SP	08ALL	0	TO->FROM	G16_010A	G15063_T 345.00 - WOODRING 345KV CKT 1	956	0.1851	104.6857	P12:345:AEPW-GRDA:T.NO.-7:CLEVLND7	
16WP	08ALL	0	TO->FROM	G16_033	G15063_T 345.00 - WOODRING 345KV CKT 1	955.9	0.18452	115.1394	G15063_1 345.00 345/34.5KV TRANSFORMER CKT 1	
16WP	08ALL	0	TO->FROM	G16_033	G15063_T 345.00 - WOODRING 345KV CKT 1	955.9	0.18452	115.1603	G15063_1 345.00 345/34.5KV TRANSFORMER CKT 1	
16WP	08ALL	0	TO->FROM	G16_033	G15063_T 345.00 - WOODRING 345KV CKT 1	955.9	0.18452	115.0975	G15063_1 345.00 - G15063_T 345.00 345KV CKT 1	
17G	08ALL	0	TO->FROM	G16_010A	G15063_T 345.00 - WOODRING 345KV CKT 1	955.9	0.18402	110.8475	P12:345:AEPW-GRDA:T.NO.-7:CLEVLND7	
20L	08ALL	0	TO->FROM	G16_033	G15063_T 345.00 - WOODRING 345KV CKT 1	956	0.18264	107.8228	P12:345:AEPW-GRDA:T.NO.-7:CLEVLND7	
16WP	08ALL	0	TO->FROM	G16_010A	G15063_T 345.00 - WOODRING 345KV CKT 1	955.9	0.18252	112.7522	P12:345:AEPW-GRDA:T.NO.-7:CLEVLND7	
25SP	08ALL	0	TO->FROM	G16_010A	G15063_T 345.00 - WOODRING 345KV CKT 1	956	0.18166	111.7788	DBL-THIS-G1524	
20L	08ALL	0	TO->FROM	G16_033	G15063_T 345.00 - WOODRING 345KV CKT 1	956	0.17941	100.8278	P12:138:OKGE:3TERM2	
17SP	08ALL	0	TO->FROM	G16_010A	G15063_T 345.00 - WOODRING 345KV CKT 1	956	0.17927	102.4634	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	
17SP	08ALL	0	TO->FROM	G16_033	G15063_T 345.00 - WOODRING 345KV CKT 1	956	0.17904	100.7533	MATHWSN7 345.00 - TATONGA7 345.00 345KV CKT 1	
17G	08ALL	0	TO->FROM	G16_033	G15063_T 345.00 - WOODRING 345KV CKT 1	955.9	0.17898	108.3544	MATHWSN7 345.00 - TATONGA7 345.00 345KV CKT 1	
17G	08ALL	0	TO->FROM	G16_010A	G15063_T 345.00 - WOODRING 345KV CKT 1	955.9	0.17856	108.3544	MATHWSN7 345.00 - TATONGA7 345.00 345KV CKT 1	
17SP	08ALL	0	TO->FROM	G16_010A	G15063_T 345.00 - WOODRING 345KV CKT 1	956	0.17854	100.7533	MATHWSN7 345.00 - TATONGA7 345.00 345KV CKT 1	
17G	08ALL	0	TO->FROM	G16_010A	G15063_T 345.00 - WOODRING 345KV CKT 1	955.9	0.17836	104.1516	CANEYRV7 345.00 - NEOSHO 345KV CKT 1	
20L	08ALL	0	TO->FROM	G16_033	G15063_T 345.00 - WOODRING 345KV CKT 1	956	0.17831	100.7922	MORISNT4 138.00 - STILLWATER 138KV CKT 1	
17G	08ALL	0	TO->FROM	G16_010A	G15063_T 345.00 - WOODRING 345KV CKT 1	955.9	0.17796	108.153	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	
17SP	08ALL	0	TO->FROM	G16_010A	G15063_T 345.00 - WOODRING 345KV CKT 1	956	0.17775	100.238	P12:138:OKGE:3TERM2	
17SP	08ALL	0	TO->FROM	G16_010A	G15063_T 345.00 - WOODRING 345KV CKT 1	956	0.17768	100.2665	MORISNT4 138.00 - STILLWATER 138KV CKT 1	
17G	08ALL	0	TO->FROM	G16_010A	G15063_T 345.00 - WOODRING 345KV CKT 1	955.9	0.17713	105.3694	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	
17G	08ALL	0	TO->FROM	G16_010A	G15063_T 345.00 - WOODRING 345KV CKT 1	955.9	0.17713	104.4258	G16-012-TAP 345.00 - WAVERLY7 345.00 345KV CKT 1	
16WP	08ALL	0	TO->FROM	G16_010A	G15063_T 345.00 - WOODRING 345KV CKT 1	955.9	0.1767	106.638	CANEYRV7 345.00 - NEOSHO 345KV CKT 1	
25SP	08ALL	0	TO->FROM	G16_010A	G15063_T 345.00 - WOODRING 345KV CKT 1	956	0.17636	109.9589	DBL-THIS-WWRD	
17G	08ALL	0	TO->FROM	G16_010A	G15063_T 345.00 - WOODRING 345KV CKT 1	955.9	0.17628	105.2454	P12:138:OKGE:3TERM2	
16WP	08ALL	0	TO->FROM	G16_033	G15063_T 345.00 - WOODRING 345KV CKT 1	955.9	0.17624	111.4372	MATHWSN7 345.00 - TATONGA7 345.00 345KV CKT 1	
16WP	08ALL	0	TO->FROM	G16_033	G15063_T 345.00 - WOODRING 345KV CKT 1	955.9	0.17624	106.2379	G11_051T 345.00 - TATONGA7 345.00 345KV CKT 1	
17G	08ALL	0	TO->FROM	G16_010A	G15063_T 345.00 - WOODRING 345KV CKT 1	955.9	0.1762	105.259	MORISNT4 138.00 - STILLWATER 138KV CKT 1	
16WP	08ALL	0	TO->FROM	G16_010A	G15063_T 345.00 - WOODRING 345KV CKT 1	955.9	0.17614	110.7921	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	
16WP	08ALL	0	TO->FROM	G16_010A	G15063_T 345.00 - WOODRING 345KV CKT 1	955.9	0.1758	111.4372	MATHWSN7 345.00 - TATONGA7 345.00 345KV CKT 1	
16WP	08ALL	0	TO->FROM	G16_010A	G15063_T 345.00 - WOODRING 345KV CKT 1	955.9	0.1758	106.2379	G11_051T 345.00 - TATONGA7 345.00 345KV CKT 1	
20L	08ALL	0	TO->FROM	G16_033	G15063_T 345.00 - WOODRING 345KV CKT 1	956	0.17575	101.241	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	
20L	08ALL	0	TO->FROM	G16_033	G15063_T 345.00 - WOODRING 345KV CKT 1	956	0.17575	100.2939	G16-012-TAP 345.00 - WAVERLY7 345.00 345KV CKT 1	
16WP	08ALL	0	TO->FROM	G16_010A	G15063_T 345.00 - WOODRING 345KV CKT 1	955.9	0.1756	108.0731	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	
16WP	08ALL	0	TO->FROM	G16_010A	G15063_T 345.00 - WOODRING 345KV CKT 1	955.9	0.1756	107.1421	G16-012-TAP 345.00 - WAVERLY7 345.00 345KV CKT 1	
16WP	08ALL	0	TO->FROM	G16_010A	G15063_T 345.00 - WOODRING 345KV CKT 1	955.9	0.1756	106.1796	WAVERLY7 345.00 - WOLF CREEK 345KV CKT 1	
20L	08ALL	0	TO->FROM	G16_033	G15063_T 345.00 - WOODRING 345KV CKT 1	956	0.17531	120.5792	SOONER - SPRING CREEK 345KV CKT 1	
20L	08ALL	0	TO->FROM	G16_033	G15063_T 345.00 - WOODRING 345KV CKT 1	956	0.17531	120.1085	NORTHWEST - SPRING CREEK 345KV CKT 1	
20SP	08ALL	0	TO->FROM	G16_010A	G15063_T 345.00 - WOODRING 345KV CKT 1	955.9	0.17483	110.6128	SOONER - SPRING CREEK 345KV CKT 1	
25SP	08ALL	0	TO->FROM	G16_033	G15063_T 345.00 - WOODRING 345KV CKT 1	956	0.1747	109.9589	DBL-THIS-WWRD	
16WP	08ALL	0	TO->FROM	G16_010A	G15063_T 345.00 - WOODRING 345KV CKT 1	955.9	0.17462	107.9096	P12:138:OKGE:3TERM2	
17SP	08ALL	0	TO->FROM	G16_010A	G15063_T 345.00 - WOODRING 345KV CKT 1	956	0.17456	106.9972	G15063_1 345.00 - G15063_T 345.00 345KV CKT 1	
17SP	08ALL	0	TO->FROM	G16_010A	G15063_T 345.00 - WOODRING 345KV CKT 1	956	0.17456	107.1436	G15063_1 345.00 345/34.5KV TRANSFORMER CKT 1	
17SP	08ALL	0	TO->FROM	G16_010A	G15063_T 345.00 - WOODRING 345KV CKT 1	956	0.17456	107.0704	G15063_1 345.00 - G15063_T 345.00 345KV CKT 1	

SEASON	GROUP	SCENARIO	DIRECTION	SOURCE	MONITORED ELEMENT	RATE		CONTINGENCY		CONTINGENCY
						(MVA)	TDF	LOADING %		
16WP	08ALL	0	TO->FROM	G16_010A	G15063_T 345.00 - WOODRING 345KV CKT 1	955.9	0.17454	107.915	MORISNT4 138.00 - STILLWATER 138KV CKT 1	
20SP	08ALL	0	TO->FROM	G16_010A	G15063_T 345.00 - WOODRING 345KV CKT 1	955.9	0.17412	117.4848	NORTHWEST - SPRING CREEK 345KV CKT 1	
25SP	08ALL	0	TO->FROM	G16_010A	G15063_T 345.00 - WOODRING 345KV CKT 1	956	0.17328	129.9297	SOONER - SPRING CREEK 345KV CKT 1	
17G	08ALL	0	TO->FROM	G16_010A	G15063_T 345.00 - WOODRING 345KV CKT 1	955.9	0.17323	112.6746	G15063_1 345.00 345/34.5KV TRANSFORMER CKT 1	
17G	08ALL	0	TO->FROM	G16_010A	G15063_T 345.00 - WOODRING 345KV CKT 1	955.9	0.17323	112.6746	G15063_1 345.00 345/34.5KV TRANSFORMER CKT 1	
17G	08ALL	0	TO->FROM	G16_010A	G15063_T 345.00 - WOODRING 345KV CKT 1	955.9	0.17323	112.6118	G15063_1 345.00 - G15063_T 345.00 345KV CKT 1	
20L	08ALL	0	TO->FROM	G16_033	G15063_T 345.00 - WOODRING 345KV CKT 1	956	0.17312	107.4417	G15063_1 345.00 - G15063_T 345.00 345KV CKT 1	
20L	08ALL	0	TO->FROM	G16_033	G15063_T 345.00 - WOODRING 345KV CKT 1	956	0.17312	107.5882	G15063_1 345.00 345/34.5KV TRANSFORMER CKT 1	
20L	08ALL	0	TO->FROM	G16_033	G15063_T 345.00 - WOODRING 345KV CKT 1	956	0.17312	107.5254	G15063_1 345.00 - G15063_T 345.00 345KV CKT 1	
20L	08ALL	0	TO->FROM	G16_033	G15063_T 345.00 - WOODRING 345KV CKT 1	956	0.17308	102.1022	DBL-THIS-G1524	
20SP	08ALL	0	TO->FROM	G16_010A	G15063_T 345.00 - WOODRING 345KV CKT 1	955.9	0.17306	103.397	CLEVELAND - G15066_T 345.00 345KV CKT 1	
20WP	08ALL	0	TO->FROM	G16_033	G15063_T 345.00 - WOODRING 345KV CKT 1	956	0.17278	107.3794	DBL-TGA-MATT	
25SP	08ALL	0	TO->FROM	G16_010A	G15063_T 345.00 - WOODRING 345KV CKT 1	956	0.17259	136.6694	NORTHWEST - SPRING CREEK 345KV CKT 1	
25SP	08ALL	0	TO->FROM	G16_010A	G15063_T 345.00 - WOODRING 345KV CKT 1	956	0.17238	115.2327	CLEVELAND - G15066_T 345.00 345KV CKT 1	
25SP	08ALL	0	TO->FROM	G16_010A	G15063_T 345.00 - WOODRING 345KV CKT 1	956	0.17238	111.0172	G15066_T 345.00 - SOONER 345KV CKT 1	
16WP	08ALL	0	TO->FROM	G16_010A	G15063_T 345.00 - WOODRING 345KV CKT 1	955.9	0.17152	115.1394	G15063_1 345.00 345/34.5KV TRANSFORMER CKT 1	
16WP	08ALL	0	TO->FROM	G16_010A	G15063_T 345.00 - WOODRING 345KV CKT 1	955.9	0.17152	115.1603	G15063_1 345.00 345/34.5KV TRANSFORMER CKT 1	
16WP	08ALL	0	TO->FROM	G16_010A	G15063_T 345.00 - WOODRING 345KV CKT 1	955.9	0.17152	115.0975	G15063_1 345.00 - G15063_T 345.00 345KV CKT 1	
20WP	08ALL	0	TO->FROM	G16_010A	G15063_T 345.00 - WOODRING 345KV CKT 1	956	0.17095	121.8296	SOONER - SPRING CREEK 345KV CKT 1	
20WP	08ALL	0	TO->FROM	G16_010A	G15063_T 345.00 - WOODRING 345KV CKT 1	956	0.17095	121.2961	NORTHWEST - SPRING CREEK 345KV CKT 1	
20WP	08ALL	0	TO->FROM	G16_010A	G15063_T 345.00 - WOODRING 345KV CKT 1	956	0.17093	111.7405	CLEVELAND - G15066_T 345.00 345KV CKT 1	
20WP	08ALL	0	TO->FROM	G16_010A	G15063_T 345.00 - WOODRING 345KV CKT 1	956	0.17093	107.5564	G15066_T 345.00 - SOONER 345KV CKT 1	
17G	08ALL	0	TO->FROM	G16_010A	G15063_T 345.00 - WOODRING 345KV CKT 1	955.9	0.17044	103.7046	G15052_T 345.00 - ROSE HILL 345KV CKT 1	
25SP	08ALL	0	TO->FROM	G16_010A	G15063_T 345.00 - WOODRING 345KV CKT 1	956	0.16908	105.947	WOODRING (WOODRNG2) 345/138/13.8KV TRANSFORMER CKT 1	
20L	08ALL	0	TO->FROM	G16_010A	G15063_T 345.00 - WOODRING 345KV CKT 1	956	0.16783	102.1022	DBL-THIS-G1524	
25SP	08ALL	0	TO->FROM	G16_010A	G15063_T 345.00 - WOODRING 345KV CKT 1	956	0.16706	107.564	P12:345-AEPW-GRDA:T.NO.-7-CLEVLND7	
20L	08ALL	0	TO->FROM	G16_010A	G15063_T 345.00 - WOODRING 345KV CKT 1	956	0.16318	100.864	DBL-THIS-WWRD	
20L	08ALL	0	TO->FROM	G16_033	G15063_T 345.00 - WOODRING 345KV CKT 1	956	0.16302	109.0271	DBL-TGA-MATT	
20L	08ALL	0	TO->FROM	G16_033	G15063_T 345.00 - WOODRING 345KV CKT 1	956	0.16302	101.7049	DBL-G1151-TGA	
20L	08ALL	0	TO->FROM	G16_033	G15063_T 345.00 - WOODRING 345KV CKT 1	956	0.16302	100.0731	DBL-WWRD-G1151	
20WP	08ALL	0	TO->FROM	G16_010A	G15063_T 345.00 - WOODRING 345KV CKT 1	956	0.16154	107.3794	DBL-TGA-MATT	
20L	08ALL	0	TO->FROM	G16_033	G15063_T 345.00 - WOODRING 345KV CKT 1	956	0.16151	100.864	DBL-THIS-WWRD	
25SP	08ALL	0	TO->FROM	G16_010A	G15063_T 345.00 - WOODRING 345KV CKT 1	956	0.16128	106.9216	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	
25SP	08ALL	0	TO->FROM	G16_010A	G15063_T 345.00 - WOODRING 345KV CKT 1	956	0.16128	103.6343	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	
25SP	08ALL	0	TO->FROM	G16_010A	G15063_T 345.00 - WOODRING 345KV CKT 1	956	0.16066	105.6544	P12:138:OKGE:3TERM2	
25SP	08ALL	0	TO->FROM	G16_010A	G15063_T 345.00 - WOODRING 345KV CKT 1	956	0.16062	105.6933	MORISNT4 138.00 - STILLWATER 138KV CKT 1	
25SP	08ALL	0	TO->FROM	G16_010A	G15063_T 345.00 - WOODRING 345KV CKT 1	956	0.16	103.2171	P12:138:OKGE:3TERM1	
20WP	08ALL	0	TO->FROM	G16_010A	G15063_T 345.00 - WOODRING 345KV CKT 1	956	0.15997	101.3559	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	
25SP	08ALL	0	TO->FROM	G16_010A	G15063_T 345.00 - WOODRING 345KV CKT 1	956	0.15696	111.7991	G15063_1 345.00 345/34.5KV TRANSFORMER CKT 1	
25SP	08ALL	0	TO->FROM	G16_010A	G15063_T 345.00 - WOODRING 345KV CKT 1	956	0.15696	103.0334	P12:138:OKGE:3TERM1	
25SP	08ALL	0	TO->FROM	G16_010A	G15063_T 345.00 - WOODRING 345KV CKT 1	956	0.15696	111.8095	G15063_1 345.00 345/34.5KV TRANSFORMER CKT 1	
25SP	08ALL	0	TO->FROM	G16_010A	G15063_T 345.00 - WOODRING 345KV CKT 1	956	0.15696	111.7468	G15063_1 345.00 - G15063_T 345.00 345KV CKT 1	
20WP	08ALL	0	TO->FROM	G16_010A	G15063_T 345.00 - WOODRING 345KV CKT 1	956	0.15579	105.6936	G15063_1 345.00 - G15063_T 345.00 345KV CKT 1	
20WP	08ALL	0	TO->FROM	G16_010A	G15063_T 345.00 - WOODRING 345KV CKT 1	956	0.15579	105.8296	G15063_1 345.00 345/34.5KV TRANSFORMER CKT 1	
20WP	08ALL	0	TO->FROM	G16_010A	G15063_T 345.00 - WOODRING 345KV CKT 1	956	0.15579	105.7668	G15063_1 345.00 - G15063_T 345.00 345KV CKT 1	
25SP	08ALL	0	TO->FROM	G16_010A	G15063_T 345.00 - WOODRING 345KV CKT 1	956	0.15372	103.3835	G15052_T 345.00 - ROSE HILL 345KV CKT 1	
20L	08ALL	0	TO->FROM	G16_010A	G15063_T 345.00 - WOODRING 345KV CKT 1	956	0.15179	109.0271	DBL-TGA-MATT	
20L	08ALL	0	TO->FROM	G16_010A	G15063_T 345.00 - WOODRING 345KV CKT 1	956	0.15179	101.7049	DBL-G1151-TGA	
20L	08ALL	0	TO->FROM	G16_010A	G15063_T 345.00 - WOODRING 345KV CKT 1	956	0.15179	100.0731	DBL-WWRD-G1151	
20L	08ALL	0	TO->FROM	G16_010A	G15063_T 345.00 - WOODRING 345KV CKT 1	956	0.15123	115.9642	CLEVELAND - G15066_T 345.00 345KV CKT 1	
20L	08ALL	0	TO->FROM	G16_010A	G15063_T 345.00 - WOODRING 345KV CKT 1	956	0.15123	111.8428	G15066_T 345.00 - SOONER 345KV CKT 1	
20L	08ALL	0	TO->FROM	G16_010A	G15063_T 345.00 - WOODRING 345KV CKT 1	956	0.15052	120.5792	SOONER - SPRING CREEK 345KV CKT 1	
20L	08ALL	0	TO->FROM	G16_010A	G15063_T 345.00 - WOODRING 345KV CKT 1	956	0.15052	120.1085	NORTHWEST - SPRING CREEK 345KV CKT 1	
20L	08ALL	0	TO->FROM	G16_010A	G15063_T 345.00 - WOODRING 345KV CKT 1	956	0.1481	107.8228	P12:345-AEPW-GRDA:T.NO.-7-CLEVLND7	
20L	08ALL	0	TO->FROM	G16_010A	G15063_T 345.00 - WOODRING 345KV CKT 1	956	0.14643	101.241	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	

SEASON	GROUP	SCENARIO	DIRECTION	SOURCE	MONITORED ELEMENT	RATE		CONTINGENCY		CONTINGENCY
						(MVA)	TDF	LOADING %		
20L	08ALL	0	TO->FROM	G16_010A	G15063_T 345.00 - WOODRING 345KV CKT 1	956	0.14643	100.2939	G16-012-TAP 345.00 - WAVERLY7 345.00 345KV CKT 1	
20L	08ALL	0	TO->FROM	G16_010A	G15063_T 345.00 - WOODRING 345KV CKT 1	956	0.14636	103.159	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	
20L	08ALL	0	TO->FROM	G16_010A	G15063_T 345.00 - WOODRING 345KV CKT 1	956	0.14376	100.8278	P12:138:OKGE:3TERM2	
20L	08ALL	0	TO->FROM	G16_010A	G15063_T 345.00 - WOODRING 345KV CKT 1	956	0.14362	100.7922	MORISNT4 138.00 - STILLWATER 138KV CKT 1	
20L	08ALL	0	TO->FROM	G16_010A	G15063_T 345.00 - WOODRING 345KV CKT 1	956	0.14245	107.4417	G15063_1 345.00 - G15063_T 345.00 345KV CKT 1	
20L	08ALL	0	TO->FROM	G16_010A	G15063_T 345.00 - WOODRING 345KV CKT 1	956	0.14245	107.5882	G15063_1 345.00 345/34.5KV TRANSFORMER CKT 1	
20L	08ALL	0	TO->FROM	G16_010A	G15063_T 345.00 - WOODRING 345KV CKT 1	956	0.14245	107.5254	G15063_1 345.00 - G15063_T 345.00 345KV CKT 1	
25SP	08ALL	0	TO->FROM	G16_010A	G15063_T 345.00 - WOODRING 345KV CKT 1	956	0.03197	103.9497	RENFROW7 345.00 - VIOLA 7 345.00 345KV CKT 1	
17SP	08ALL	0	TO->FROM	G16_010A	G15063_T 345.00 - WOODRING 345KV CKT 1	956	0.19779	101.0429	DBL-THIS-G1524	
17G	08ALL	0	TO->FROM	G16_010A	G15063_T 345.00 - WOODRING 345KV CKT 1	955.9	0.19663	104.5219	DBL-THIS-G1524	
16WP	08ALL	0	TO->FROM	G16_010A	G15063_T 345.00 - WOODRING 345KV CKT 1	955.9	0.19521	107.2919	DBL-THIS-G1524	
20WP	08ALL	0	FROM->TO	G16_010A	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1194.1	0.11231	109.796	EMPORIA ENERGY CENTER - G14_001T 345.00 345KV CKT 1	
20WP	08ALL	0	FROM->TO	G16_010A	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1194.1	0.11231	106.5718	G14_001T 345.00 - WICHITA 345KV CKT 1	
20WP	08ALL	0	FROM->TO	G16_010A	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1194.1	0.1118	114.7929	CANEYRV7 345.00 - NEOSHO 345KV CKT 1	
20WP	08ALL	0	FROM->TO	G16_010A	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1194.1	0.1118	111.083	CANEYRV7 345.00 - LATHAMS7 345.00 345KV CKT 1	
20WP	08ALL	0	FROM->TO	G16_010A	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1194.1	0.1118	107.1219	LATHAMS7 345.00 - ROSE HILL 345KV CKT 1	
16WP	08ALL	0	FROM->TO	G16_010A	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1194.2	0.10864	111.8258	EMPORIA ENERGY CENTER - G14_001T 345.00 345KV CKT 1	
16WP	08ALL	0	FROM->TO	G16_010A	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1194.2	0.10864	108.5851	G14_001T 345.00 - WICHITA 345KV CKT 1	
16WP	08ALL	0	FROM->TO	G16_010A	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1194.2	0.10684	116.3774	CANEYRV7 345.00 - NEOSHO 345KV CKT 1	
16WP	08ALL	0	FROM->TO	G16_010A	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1194.2	0.10684	112.6092	CANEYRV7 345.00 - LATHAMS7 345.00 345KV CKT 1	
16WP	08ALL	0	FROM->TO	G16_010A	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1194.2	0.10684	108.6149	LATHAMS7 345.00 - ROSE HILL 345KV CKT 1	
20WP	08ALL	0	FROM->TO	G16_010A	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1194.1	0.10542	106.9145	RENO COUNTY - WICHITA 345KV CKT 1	
17G	08ALL	0	FROM->TO	G16_010A	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1195	0.10422	107.1078	EMPORIA ENERGY CENTER - G14_001T 345.00 345KV CKT 1	
17G	08ALL	0	FROM->TO	G16_010A	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1195	0.10422	103.861	G14_001T 345.00 - WICHITA 345KV CKT 1	
17SP	08ALL	0	FROM->TO	G16_010A	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1192.7	0.10335	100.5918	CANEYRV7 345.00 - NEOSHO 345KV CKT 1	
20L	08ALL	0	FROM->TO	G16_010A	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1194.9	0.1027	118.196	EMPORIA ENERGY CENTER - G14_001T 345.00 345KV CKT 1	
20L	08ALL	0	FROM->TO	G16_010A	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1194.9	0.1027	114.9991	G14_001T 345.00 - WICHITA 345KV CKT 1	
17G	08ALL	0	FROM->TO	G16_010A	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1195	0.10267	112.2784	CANEYRV7 345.00 - NEOSHO 345KV CKT 1	
17G	08ALL	0	FROM->TO	G16_010A	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1195	0.10267	108.5127	CANEYRV7 345.00 - LATHAMS7 345.00 345KV CKT 1	
17G	08ALL	0	FROM->TO	G16_010A	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1195	0.10267	104.5127	LATHAMS7 345.00 - ROSE HILL 345KV CKT 1	
16WP	08ALL	0	FROM->TO	G16_010A	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1194.2	0.10138	108.6146	RENO COUNTY - WICHITA 345KV CKT 1	
20L	08ALL	0	FROM->TO	G16_010A	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1194.9	0.10106	124.0512	CANEYRV7 345.00 - NEOSHO 345KV CKT 1	
20L	08ALL	0	FROM->TO	G16_010A	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1194.9	0.10106	120.4191	CANEYRV7 345.00 - LATHAMS7 345.00 345KV CKT 1	
20L	08ALL	0	FROM->TO	G16_010A	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1194.9	0.10106	116.469	LATHAMS7 345.00 - ROSE HILL 345KV CKT 1	
20WP	08ALL	0	FROM->TO	G16_010A	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1194.1	0.10018	107.5102	SWISSVALE - WEST GARDNER 345KV CKT 1	
20WP	08ALL	0	FROM->TO	G16_010A	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1194.1	0.10002	106.9622	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	
20WP	08ALL	0	FROM->TO	G16_010A	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1194.1	0.09948	107.2572	RANCHRD7 345.00 - SOONER 345KV CKT 1	
20WP	08ALL	0	FROM->TO	G16_010A	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1194.1	0.09825	107.5355	CLEVELAND - G15066_T 345.00 345KV CKT 1	
20WP	08ALL	0	FROM->TO	G16_010A	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1194.1	0.09825	106.1537	G15066_T 345.00 - SOONER 345KV CKT 1	
17G	08ALL	0	FROM->TO	G16_010A	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1195	0.09706	104.3183	RENO COUNTY - WICHITA 345KV CKT 1	
16WP	08ALL	0	FROM->TO	G16_010A	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1194.2	0.09661	109.4543	SWISSVALE - WEST GARDNER 345KV CKT 1	
20WP	08ALL	0	FROM->TO	G16_010A	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1194.1	0.09649	105.2003	P12:345:AEPW-GRDA:T.NO.-7-CLEVLND7	
20L	08ALL	0	FROM->TO	G16_010A	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1194.9	0.09604	114.2545	RENO COUNTY - WICHITA 345KV CKT 1	
16WP	08ALL	0	FROM->TO	G16_010A	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1194.2	0.09598	108.744	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	
20WP	08ALL	0	FROM->TO	G16_010A	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1194.1	0.09585	105.6491	HOYT - STRANGER CREEK 345KV CKT 1	
20WP	08ALL	0	FROM->TO	G16_010A	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1194.1	0.09577	106.6918	HOYT - JEFFREY ENERGY CENTER 345KV CKT 1	
16WP	08ALL	0	FROM->TO	G16_010A	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1194.2	0.09455	109.0081	CLEVELAND - G15066_T 345.00 345KV CKT 1	
16WP	08ALL	0	FROM->TO	G16_010A	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1194.2	0.09455	107.6348	G15066_T 345.00 - SOONER 345KV CKT 1	
16WP	08ALL	0	FROM->TO	G16_010A	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1194.2	0.09378	108.7443	RANCHRD7 345.00 - SOONER 345KV CKT 1	
20L	08ALL	0	FROM->TO	G16_010A	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1194.9	0.09341	116.5237	RANCHRD7 345.00 - SOONER 345KV CKT 1	
20WP	08ALL	0	FROM->TO	G16_010A	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1194.1	0.09201	109.7657	VIOLA 7 345.00 - WICHITA 345KV CKT 1	
20WP	08ALL	0	FROM->TO	G16_010A	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1194.1	0.09201	108.7105	EMPORIA ENERGY CENTER - G14_001T 345.00 345KV CKT 1	
20WP	08ALL	0	FROM->TO	G16_010A	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1194.1	0.09201	108.7063	LACYGNE 345/22.0KV TRANSFORMER CKT 1	
20WP	08ALL	0	FROM->TO	G16_010A	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1194.1	0.09201	107.7586	LACYGNE 345/24.0KV TRANSFORMER CKT 1	
17G	08ALL	0	FROM->TO	G16_010A	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1195	0.09197	105.743	SWISSVALE - WEST GARDNER 345KV CKT 1	

SEASON	GROUP	SCENARIO	DIRECTION	SOURCE	MONITORED ELEMENT	RATE		CONTINGENCY		CONTINGENCY
						(MVA)	TDF	LOADING %		
16WP	08ALL	0	FROM->TO	G16_010A	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1194.2	0.09169	107.5213	HOYT - STRANGER CREEK 345KV CKT 1	
17G	08ALL	0	FROM->TO	G16_010A	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1195	0.09169	104.4595	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	
16WP	08ALL	0	FROM->TO	G16_010A	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1194.2	0.09168	108.6464	HOYT - JEFFREY ENERGY CENTER 345KV CKT 1	
20L	08ALL	0	FROM->TO	G16_010A	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1194.9	0.09165	114.8236	SWISSVALE - WEST GARDNER 345KV CKT 1	
20L	08ALL	0	FROM->TO	G16_010A	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1194.9	0.09113	114.4378	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	
17G	08ALL	0	FROM->TO	G16_010A	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1195	0.09056	104.391	RANCHRD7 345.00 - SOONER 345KV CKT 1	
17G	08ALL	0	FROM->TO	G16_010A	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1195	0.09048	105.1494	CLEVELAND - G15066_T 345.00 345KV CKT 1	
17G	08ALL	0	FROM->TO	G16_010A	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1195	0.09048	103.777	G15066_T 345.00 - SOONER 345KV CKT 1	
17G	08ALL	0	FROM->TO	G16_010A	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1195	0.0886	102.9374	P12:345:AEPW-GRDA:T.NO.-7:CLEVLND7	
16WP	08ALL	0	FROM->TO	G16_010A	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1194.2	0.08773	111.1968	System Intact	
16WP	08ALL	0	FROM->TO	G16_010A	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1194.2	0.08773	110.1668	LACYGNE 345/22.0KV TRANSFORMER CKT 1	
16WP	08ALL	0	FROM->TO	G16_010A	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1194.2	0.08773	106.4824	G15063_T 345.00 - MATHWSM7 345.00 345KV CKT 1	
16WP	08ALL	0	FROM->TO	G16_010A	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1194.2	0.08773	110.1675	LACYGNE 345/22.0KV TRANSFORMER CKT 1	
16WP	08ALL	0	FROM->TO	G16_010A	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1194.2	0.08773	109.2264	LACYGNE 345/22.0KV TRANSFORMER CKT 1	
20L	08ALL	0	FROM->TO	G16_010A	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1194.9	0.08757	112.4242	HOYT - STRANGER CREEK 345KV CKT 1	
20L	08ALL	0	FROM->TO	G16_010A	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1194.9	0.08748	112.7196	HOYT - JEFFREY ENERGY CENTER 345KV CKT 1	
17G	08ALL	0	FROM->TO	G16_010A	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1195	0.08713	103.5662	HOYT - STRANGER CREEK 345KV CKT 1	
17G	08ALL	0	FROM->TO	G16_010A	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1195	0.08707	104.6081	HOYT - JEFFREY ENERGY CENTER 345KV CKT 1	
20L	08ALL	0	FROM->TO	G16_010A	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1194.9	0.08692	116.0742	CLEVELAND - G15066_T 345.00 345KV CKT 1	
20L	08ALL	0	FROM->TO	G16_010A	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1194.9	0.08692	114.7185	G15066_T 345.00 - SOONER 345KV CKT 1	
20L	08ALL	0	FROM->TO	G16_010A	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1194.9	0.08585	113.8049	P12:345:AEPW-GRDA:T.NO.-7:CLEVLND7	
20L	08ALL	0	FROM->TO	G16_010A	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1194.9	0.08463	111.7837	P12:069:WERE:ATHE-WOLF_69::	
20L	08ALL	0	FROM->TO	G16_010A	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1194.9	0.08463	111.9009	WOLF CREEK (WOLF TX-6) 345/69/17.0KV TRANSFORMER CKT 1	
20L	08ALL	0	FROM->TO	G16_010A	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1194.9	0.08463	111.7753	BURLINGTON JUNCTION - WOLF CREEK 69KV CKT 1	
17G	08ALL	0	FROM->TO	G16_010A	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1195	0.08377	106.7788	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	
17G	08ALL	0	FROM->TO	G16_010A	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1195	0.08377	105.7997	P12:345:AEPW-GRDA:T.NO.-7:CLEVLND7	
17G	08ALL	0	FROM->TO	G16_010A	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1195	0.08377	105.8376	LACYGNE 345/22.0KV TRANSFORMER CKT 1	
17G	08ALL	0	FROM->TO	G16_010A	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1195	0.08377	104.939	LACYGNE 345/22.0KV TRANSFORMER CKT 1	
20L	08ALL	0	FROM->TO	G16_010A	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1194.9	0.08331	112.3607	TUCO INTERCHANGE - YOAKUM_345 345.00 345KV CKT 1	
20WP	08ALL	0	FROM->TO	G16_033	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1194.1	0.07556	109.796	EMPORIA ENERGY CENTER - G14_001T 345.00 345KV CKT 1	
20WP	08ALL	0	FROM->TO	G16_033	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1194.1	0.07556	106.5718	G14_001T 345.00 - WICHITA 345KV CKT 1	
16WP	08ALL	0	FROM->TO	G16_033	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1194.2	0.07549	111.8258	EMPORIA ENERGY CENTER - G14_001T 345.00 345KV CKT 1	
16WP	08ALL	0	FROM->TO	G16_033	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1194.2	0.07549	108.5851	G14_001T 345.00 - WICHITA 345KV CKT 1	
20WP	08ALL	0	FROM->TO	G16_010A	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1194.1	0.07343	106.592	ROSE HILL - WOLF CREEK 345KV CKT 1	
16WP	08ALL	0	FROM->TO	G16_033	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1194.2	0.07299	116.3774	CANEYRV7 345.00 - NEOSHO 345KV CKT 1	
16WP	08ALL	0	FROM->TO	G16_033	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1194.2	0.07299	112.6092	CANEYRV7 345.00 - LATHAMS7 345.00 345KV CKT 1	
16WP	08ALL	0	FROM->TO	G16_033	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1194.2	0.07299	108.6149	LATHAMS7 345.00 - ROSE HILL 345KV CKT 1	
20WP	08ALL	0	FROM->TO	G16_033	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1194.1	0.07289	114.7929	CANEYRV7 345.00 - NEOSHO 345KV CKT 1	
20WP	08ALL	0	FROM->TO	G16_033	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1194.1	0.07289	111.083	CANEYRV7 345.00 - LATHAMS7 345.00 345KV CKT 1	
20WP	08ALL	0	FROM->TO	G16_033	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1194.1	0.07289	107.1219	LATHAMS7 345.00 - ROSE HILL 345KV CKT 1	
16WP	08ALL	0	FROM->TO	G16_033	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1194.2	0.07178	109.0081	CLEVELAND - G15066_T 345.00 345KV CKT 1	
16WP	08ALL	0	FROM->TO	G16_033	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1194.2	0.07178	107.6348	G15066_T 345.00 - SOONER 345KV CKT 1	
20WP	08ALL	0	FROM->TO	G16_033	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1194.1	0.0715	107.5355	CLEVELAND - G15066_T 345.00 345KV CKT 1	
20WP	08ALL	0	FROM->TO	G16_033	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1194.1	0.0715	106.1537	G15066_T 345.00 - SOONER 345KV CKT 1	
20WP	08ALL	0	FROM->TO	G16_033	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1194.1	0.07118	106.9145	RENO COUNTY - WICHITA 345KV CKT 1	
17G	08ALL	0	FROM->TO	G16_033	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1195	0.07109	107.1078	EMPORIA ENERGY CENTER - G14_001T 345.00 345KV CKT 1	
17G	08ALL	0	FROM->TO	G16_033	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1195	0.07109	103.861	G14_001T 345.00 - WICHITA 345KV CKT 1	
16WP	08ALL	0	FROM->TO	G16_010A	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1194.2	0.07097	107.8953	ROSE HILL - WOLF CREEK 345KV CKT 1	
16WP	08ALL	0	FROM->TO	G16_033	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1194.2	0.07097	108.6146	RENO COUNTY - WICHITA 345KV CKT 1	
20WP	08ALL	0	FROM->TO	G16_033	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1194.1	0.06997	105.2003	P12:345:AEPW-GRDA:T.NO.-7:CLEVLND7	
17SP	08ALL	0	FROM->TO	G16_033	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1192.7	0.06956	100.5918	CANEYRV7 345.00 - NEOSHO 345KV CKT 1	
17G	08ALL	0	FROM->TO	G16_033	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1195	0.06884	112.2784	CANEYRV7 345.00 - NEOSHO 345KV CKT 1	
17G	08ALL	0	FROM->TO	G16_033	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1195	0.06884	108.5127	CANEYRV7 345.00 - LATHAMS7 345.00 345KV CKT 1	
17G	08ALL	0	FROM->TO	G16_033	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1195	0.06884	104.5127	LATHAMS7 345.00 - ROSE HILL 345KV CKT 1	
20WP	08ALL	0	FROM->TO	G16_033	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1194.1	0.06812	106.9622	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	

SEASON	GROUP	SCENARIO	DIRECTION	SOURCE	MONITORED ELEMENT	RATE		CONTINGENCY		CONTINGENCY
						(MVA)	TDF	LOADING %		
16WP	08ALL	0	FROM->TO	G16_033	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1194.2	0.06799	108.744	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	
17G	08ALL	0	FROM->TO	G16_010A	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1195	0.06798	104.3701	ROSE HILL - WOLF CREEK 345KV CKT 1	
17G	08ALL	0	FROM->TO	G16_033	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1195	0.06772	105.1494	CLEVELAND - G15066_T 345.00 345KV CKT 1	
17G	08ALL	0	FROM->TO	G16_033	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1195	0.06772	103.777	G15066_T 345.00 - SOONER 345KV CKT 1	
16WP	08ALL	0	FROM->TO	G16_033	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1194.2	0.06754	109.4543	SWISSVALE - WEST GARDNER 345KV CKT 1	
20WP	08ALL	0	FROM->TO	G16_033	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1194.1	0.0674	107.5102	SWISSVALE - WEST GARDNER 345KV CKT 1	
20L	08ALL	0	FROM->TO	G16_010A	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1194.9	0.0671	111.7771	ROSE HILL - WOLF CREEK 345KV CKT 1	
17G	08ALL	0	FROM->TO	G16_033	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1195	0.06667	104.3183	RENO COUNTY - WICHITA 345KV CKT 1	
17G	08ALL	0	FROM->TO	G16_033	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1195	0.06614	102.9374	P12:345:AEPW-GRDA:T.NO.-7:CLEVLND7	
20WP	08ALL	0	FROM->TO	G16_010A	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1194.1	0.06602	107.4389	BENTON - WOLF CREEK 345KV CKT 1	
20L	08ALL	0	FROM->TO	G16_033	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1194.9	0.06596	118.196	EMPORIA ENERGY CENTER - G14_001T 345.00 345KV CKT 1	
20L	08ALL	0	FROM->TO	G16_033	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1194.9	0.06596	114.9991	G14_001T 345.00 - WICHITA 345KV CKT 1	
20WP	08ALL	0	FROM->TO	G16_033	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1194.1	0.06585	105.6491	HOYT - STRANGER CREEK 345KV CKT 1	
20WP	08ALL	0	FROM->TO	G16_033	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1194.1	0.06579	106.6918	HOYT - JEFFREY ENERGY CENTER 345KV CKT 1	
16WP	08ALL	0	FROM->TO	G16_033	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1194.2	0.06572	107.5213	HOYT - STRANGER CREEK 345KV CKT 1	
16WP	08ALL	0	FROM->TO	G16_033	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1194.2	0.06569	108.6464	HOYT - JEFFREY ENERGY CENTER 345KV CKT 1	
20WP	08ALL	0	FROM->TO	G16_033	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1194.1	0.06376	109.7657	VIOLA 7 345.00 - WICHITA 345KV CKT 1	
20WP	08ALL	0	FROM->TO	G16_033	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1194.1	0.06376	108.7105	EMPORIA ENERGY CENTER - G14_001T 345.00 345KV CKT 1	
20WP	08ALL	0	FROM->TO	G16_033	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1194.1	0.06376	108.7063	LACYGNE 345/22.0KV TRANSFORMER CKT 1	
20WP	08ALL	0	FROM->TO	G16_033	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1194.1	0.06376	107.7586	LACYGNE 345/24.0KV TRANSFORMER CKT 1	
17G	08ALL	0	FROM->TO	G16_033	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1195	0.06371	104.4595	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	
16WP	08ALL	0	FROM->TO	G16_033	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1194.2	0.06358	111.1968	System Intact	
16WP	08ALL	0	FROM->TO	G16_033	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1194.2	0.06358	110.1668	LACYGNE 345/22.0KV TRANSFORMER CKT 1	
16WP	08ALL	0	FROM->TO	G16_033	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1194.2	0.06358	106.4824	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	
16WP	08ALL	0	FROM->TO	G16_033	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1194.2	0.06358	110.1675	LACYGNE 345/22.0KV TRANSFORMER CKT 1	
16WP	08ALL	0	FROM->TO	G16_033	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1194.2	0.06358	109.2264	LACYGNE 345/24.0KV TRANSFORMER CKT 1	
17G	08ALL	0	FROM->TO	G16_033	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1195	0.06291	105.743	SWISSVALE - WEST GARDNER 345KV CKT 1	
20L	08ALL	0	FROM->TO	G16_033	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1194.9	0.06215	124.0512	CANEYRV7 345.00 - NEOSHO 345KV CKT 1	
20L	08ALL	0	FROM->TO	G16_033	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1194.9	0.06215	120.4191	CANEYRV7 345.00 - LATHAM57 345.00 345KV CKT 1	
20L	08ALL	0	FROM->TO	G16_033	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1194.9	0.06215	116.469	LATHAM57 345.00 - ROSE HILL 345KV CKT 1	
16WP	08ALL	0	FROM->TO	G16_010A	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1194.2	0.06197	108.6365	BENTON - WOLF CREEK 345KV CKT 1	
20L	08ALL	0	FROM->TO	G16_033	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1194.9	0.06181	114.2545	RENO COUNTY - WICHITA 345KV CKT 1	
17G	08ALL	0	FROM->TO	G16_033	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1195	0.06117	103.5662	HOYT - STRANGER CREEK 345KV CKT 1	
17G	08ALL	0	FROM->TO	G16_033	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1195	0.0611	104.6081	HOYT - JEFFREY ENERGY CENTER 345KV CKT 1	
20L	08ALL	0	FROM->TO	G16_033	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1194.9	0.06018	116.0742	CLEVELAND - G15066_T 345.00 345KV CKT 1	
20L	08ALL	0	FROM->TO	G16_033	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1194.9	0.06018	114.7185	G15066_T 345.00 - SOONER 345KV CKT 1	
17G	08ALL	0	FROM->TO	G16_033	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1195	0.05964	106.7788	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	
17G	08ALL	0	FROM->TO	G16_033	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1195	0.05964	105.7997	P12:345:AEPW-GRDA:T.NO.-7:CLEVLND7	
17G	08ALL	0	FROM->TO	G16_033	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1195	0.05964	105.8376	LACYGNE 345/22.0KV TRANSFORMER CKT 1	
17G	08ALL	0	FROM->TO	G16_033	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1195	0.05964	104.939	LACYGNE 345/24.0KV TRANSFORMER CKT 1	
20L	08ALL	0	FROM->TO	G16_033	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1194.9	0.05934	113.8049	P12:345:AEPW-GRDA:T.NO.-7:CLEVLND7	
20L	08ALL	0	FROM->TO	G16_033	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1194.9	0.05924	114.4378	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	
20L	08ALL	0	FROM->TO	G16_010A	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1194.9	0.05923	112.0913	BENTON - WOLF CREEK 345KV CKT 1	
20L	08ALL	0	FROM->TO	G16_033	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1194.9	0.05887	114.8236	SWISSVALE - WEST GARDNER 345KV CKT 1	
17G	08ALL	0	FROM->TO	G16_010A	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1195	0.05878	105.0836	BENTON - WOLF CREEK 345KV CKT 1	
20L	08ALL	0	FROM->TO	G16_033	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1194.9	0.05759	112.4242	HOYT - STRANGER CREEK 345KV CKT 1	
20L	08ALL	0	FROM->TO	G16_033	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1194.9	0.05751	112.7196	HOYT - JEFFREY ENERGY CENTER 345KV CKT 1	
20L	08ALL	0	FROM->TO	G16_033	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1194.9	0.05524	111.7837	P12:069:WERE:ATHE-WOLF_69::	
20L	08ALL	0	FROM->TO	G16_033	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1194.9	0.05524	111.9009	WOLF CREEK (WOLF TX-6) 345/69/17.0KV TRANSFORMER CKT 1	
20L	08ALL	0	FROM->TO	G16_033	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1194.9	0.05524	111.7753	BURLINGTON JUNCTION - WOLF CREEK 69KV CKT 1	
20L	08ALL	0	FROM->TO	G16_033	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1194.9	0.05506	112.3607	TUCO INTERCHANGE - YOAKUM 345 345.00 345KV CKT 1	
20WP	08ALL	0	FROM->TO	G16_033	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1194.1	0.05447	107.2572	RANCHRD7 345.00 - SOONER 345KV CKT 1	
16WP	08ALL	0	FROM->TO	G16_033	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1194.2	0.05344	108.7443	RANCHRD7 345.00 - SOONER 345KV CKT 1	
17G	08ALL	0	FROM->TO	G16_033	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1195	0.05024	104.391	RANCHRD7 345.00 - SOONER 345KV CKT 1	
20WP	08ALL	0	FROM->TO	G16_033	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1194.1	0.04921	107.4389	BENTON - WOLF CREEK 345KV CKT 1	

SEASON	GROUP	SCENARIO	DIRECTION	SOURCE	MONITORED ELEMENT	RATE		CONTINGENCY		CONTINGENCY
						(MVA)	TDF	LOADING %		
16WP	08ALL	0	FROM->TO	G16_033	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1194.2	0.04899	108.6365	BENTON - WOLF CREEK 345KV CKT 1	
20L	08ALL	0	FROM->TO	G16_033	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1194.9	0.04841	116.5237	RANCHR7 345.00 - SOONER 345KV CKT 1	
20WP	08ALL	0	FROM->TO	G16_033	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1194.1	0.0481	106.592	ROSE HILL - WOLF CREEK 345KV CKT 1	
16WP	08ALL	0	FROM->TO	G16_033	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1194.2	0.04808	107.8953	ROSE HILL - WOLF CREEK 345KV CKT 1	
17G	08ALL	0	FROM->TO	G16_033	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1195	0.04581	105.0836	BENTON - WOLF CREEK 345KV CKT 1	
17G	08ALL	0	FROM->TO	G16_033	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1195	0.0451	104.3701	ROSE HILL - WOLF CREEK 345KV CKT 1	
20L	08ALL	0	FROM->TO	G16_033	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1194.9	0.04242	112.0913	BENTON - WOLF CREEK 345KV CKT 1	
20L	08ALL	0	FROM->TO	G16_033	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1194.9	0.04177	111.7771	ROSE HILL - WOLF CREEK 345KV CKT 1	
16WP	08ALL	0	TO->FROM	G16_010A	G16-012-TAP 345.00 - WAVERLY7 345.00 345KV CKT 1	1194.3	0.10684	100.3347	CANEYRV7 345.00 - NEOSHO 345KV CKT 1	
20L	08ALL	0	TO->FROM	G16_010A	G16-012-TAP 345.00 - WAVERLY7 345.00 345KV CKT 1	1188.7	0.1027	102.8723	EMPORIA ENERGY CENTER - G14_001T 345.00 345KV CKT 1	
20L	08ALL	0	TO->FROM	G16_010A	G16-012-TAP 345.00 - WAVERLY7 345.00 345KV CKT 1	1188.7	0.10106	108.758	CANEYRV7 345.00 - NEOSHO 345KV CKT 1	
20L	08ALL	0	TO->FROM	G16_010A	G16-012-TAP 345.00 - WAVERLY7 345.00 345KV CKT 1	1188.7	0.10106	105.107	CANEYRV7 345.00 - LATHAMS7 345.00 345KV CKT 1	
20L	08ALL	0	TO->FROM	G16_010A	G16-012-TAP 345.00 - WAVERLY7 345.00 345KV CKT 1	1188.7	0.10106	101.1363	LATHAMS7 345.00 - ROSE HILL 345KV CKT 1	
20L	08ALL	0	TO->FROM	G16_010A	G16-012-TAP 345.00 - WAVERLY7 345.00 345KV CKT 1	1188.7	0.09341	101.1913	RANCHR7 345.00 - SOONER 345KV CKT 1	
20L	08ALL	0	TO->FROM	G16_010A	G16-012-TAP 345.00 - WAVERLY7 345.00 345KV CKT 1	1188.7	0.08692	100.7394	CLEVELAND - G15066_T 345.00 345KV CKT 1	
16WP	08ALL	0	TO->FROM	G16_033	G16-012-TAP 345.00 - WAVERLY7 345.00 345KV CKT 1	1194.3	0.07299	100.3347	CANEYRV7 345.00 - NEOSHO 345KV CKT 1	
20L	08ALL	0	TO->FROM	G16_033	G16-012-TAP 345.00 - WAVERLY7 345.00 345KV CKT 1	1188.7	0.06596	102.8723	EMPORIA ENERGY CENTER - G14_001T 345.00 345KV CKT 1	
20L	08ALL	0	TO->FROM	G16_033	G16-012-TAP 345.00 - WAVERLY7 345.00 345KV CKT 1	1188.7	0.06215	108.758	CANEYRV7 345.00 - NEOSHO 345KV CKT 1	
20L	08ALL	0	TO->FROM	G16_033	G16-012-TAP 345.00 - WAVERLY7 345.00 345KV CKT 1	1188.7	0.06215	105.107	CANEYRV7 345.00 - LATHAMS7 345.00 345KV CKT 1	
20L	08ALL	0	TO->FROM	G16_033	G16-012-TAP 345.00 - WAVERLY7 345.00 345KV CKT 1	1188.7	0.06215	101.1363	LATHAMS7 345.00 - ROSE HILL 345KV CKT 1	
20L	08ALL	0	TO->FROM	G16_033	G16-012-TAP 345.00 - WAVERLY7 345.00 345KV CKT 1	1188.7	0.06018	100.7394	CLEVELAND - G15066_T 345.00 345KV CKT 1	
20L	08ALL	0	TO->FROM	G16_033	G16-012-TAP 345.00 - WAVERLY7 345.00 345KV CKT 1	1188.7	0.04841	101.1913	RANCHR7 345.00 - SOONER 345KV CKT 1	
17SP	08ALL	0	FROM->TO	G16_033	G16-032-TAP - COTTONWOOD 138KV CKT 1	220.8	0.11424	134.154	WAUKOMIS - WAUKOMIS TAP 138KV CKT 1	
17SP	08ALL	0	FROM->TO	G16_033	G16-032-TAP - COTTONWOOD 138KV CKT 1	220.8	0.11424	133.5199	HENESSEY - WAUKOMIS 138KV CKT 1	
17SP	08ALL	0	FROM->TO	G16_033	G16-032-TAP - COTTONWOOD 138KV CKT 1	220.8	0.11424	132.75	DOVER SW - HENESSEY 138KV CKT 1	
17G	08ALL	0	FROM->TO	G16_033	G16-032-TAP - COTTONWOOD 138KV CKT 1	220.5	0.11419	136.4198	WAUKOMIS - WAUKOMIS TAP 138KV CKT 1	
17G	08ALL	0	FROM->TO	G16_033	G16-032-TAP - COTTONWOOD 138KV CKT 1	220.5	0.11419	136.057	HENESSEY - WAUKOMIS 138KV CKT 1	
17G	08ALL	0	FROM->TO	G16_033	G16-032-TAP - COTTONWOOD 138KV CKT 1	220.5	0.11419	135.5581	DOVER SW - HENESSEY 138KV CKT 1	
20SP	08ALL	0	FROM->TO	G16_033	G16-032-TAP - COTTONWOOD 138KV CKT 1	221	0.11417	129.6473	WAUKOMIS - WAUKOMIS TAP 138KV CKT 1	
20SP	08ALL	0	FROM->TO	G16_033	G16-032-TAP - COTTONWOOD 138KV CKT 1	221	0.11417	129.059	HENESSEY - WAUKOMIS 138KV CKT 1	
20SP	08ALL	0	FROM->TO	G16_033	G16-032-TAP - COTTONWOOD 138KV CKT 1	221	0.11417	128.2446	DOVER SW - HENESSEY 138KV CKT 1	
25SP	08ALL	0	FROM->TO	G16_033	G16-032-TAP - COTTONWOOD 138KV CKT 1	221.1	0.11413	131.1784	WAUKOMIS - WAUKOMIS TAP 138KV CKT 1	
25SP	08ALL	0	FROM->TO	G16_033	G16-032-TAP - COTTONWOOD 138KV CKT 1	221.1	0.11413	130.5904	HENESSEY - WAUKOMIS 138KV CKT 1	
25SP	08ALL	0	FROM->TO	G16_033	G16-032-TAP - COTTONWOOD 138KV CKT 1	221.1	0.11413	129.7763	DOVER SW - HENESSEY 138KV CKT 1	
16WP	08ALL	0	FROM->TO	G16_033	G16-032-TAP - COTTONWOOD 138KV CKT 1	268.8	0.11384	114.1967	WAUKOMIS - WAUKOMIS TAP 138KV CKT 1	
16WP	08ALL	0	FROM->TO	G16_033	G16-032-TAP - COTTONWOOD 138KV CKT 1	268.8	0.11384	113.8619	HENESSEY - WAUKOMIS 138KV CKT 1	
16WP	08ALL	0	FROM->TO	G16_033	G16-032-TAP - COTTONWOOD 138KV CKT 1	268.8	0.11384	113.4155	DOVER SW - HENESSEY 138KV CKT 1	
20WP	08ALL	0	FROM->TO	G16_033	G16-032-TAP - COTTONWOOD 138KV CKT 1	268.9	0.11365	112.4633	WAUKOMIS - WAUKOMIS TAP 138KV CKT 1	
20WP	08ALL	0	FROM->TO	G16_033	G16-032-TAP - COTTONWOOD 138KV CKT 1	268.9	0.11365	112.1658	HENESSEY - WAUKOMIS 138KV CKT 1	
20WP	08ALL	0	FROM->TO	G16_033	G16-032-TAP - COTTONWOOD 138KV CKT 1	268.9	0.11365	111.7196	DOVER SW - HENESSEY 138KV CKT 1	
20L	08ALL	0	FROM->TO	G16_033	G16-032-TAP - COTTONWOOD 138KV CKT 1	220.3	0.11226	136.7027	WAUKOMIS - WAUKOMIS TAP 138KV CKT 1	
20L	08ALL	0	FROM->TO	G16_033	G16-032-TAP - COTTONWOOD 138KV CKT 1	220.3	0.11226	136.5211	HENESSEY - WAUKOMIS 138KV CKT 1	
20L	08ALL	0	FROM->TO	G16_033	G16-032-TAP - COTTONWOOD 138KV CKT 1	220.3	0.11226	136.2487	DOVER SW - HENESSEY 138KV CKT 1	
17SP	08ALL	0	FROM->TO	G16_033	G16-032-TAP - COTTONWOOD 138KV CKT 1	220.8	0.10995	134.2744	P12:138:OKGE:3TERM1	
17G	08ALL	0	FROM->TO	G16_033	G16-032-TAP - COTTONWOOD 138KV CKT 1	220.5	0.10989	136.495	P12:138:OKGE:3TERM1	
20SP	08ALL	0	FROM->TO	G16_033	G16-032-TAP - COTTONWOOD 138KV CKT 1	221	0.10985	129.8129	P12:138:OKGE:3TERM1	
25SP	08ALL	0	FROM->TO	G16_033	G16-032-TAP - COTTONWOOD 138KV CKT 1	221.1	0.10981	131.3891	P12:138:OKGE:3TERM1	
16WP	08ALL	0	FROM->TO	G16_033	G16-032-TAP - COTTONWOOD 138KV CKT 1	268.8	0.10954	114.2213	P12:138:OKGE:3TERM1	
20WP	08ALL	0	FROM->TO	G16_033	G16-032-TAP - COTTONWOOD 138KV CKT 1	268.9	0.10934	112.525	P12:138:OKGE:3TERM1	
20L	08ALL	0	FROM->TO	G16_033	G16-032-TAP - COTTONWOOD 138KV CKT 1	220.3	0.10794	136.6776	P12:138:OKGE:3TERM1	
17G	08ALL	0	FROM->TO	G16_033	G16-032-TAP - COTTONWOOD 138KV CKT 1	220.5	0.10713	128.5302	CRESENT - TWIN LAKES 138KV CKT 1	
17G	08ALL	0	FROM->TO	G16_033	G16-032-TAP - COTTONWOOD 138KV CKT 1	220.5	0.10713	128.1221	COTTONWOOD CREEK - CRESENT 138KV CKT 1	
17SP	08ALL	0	FROM->TO	G16_033	G16-032-TAP - COTTONWOOD 138KV CKT 1	220.8	0.10703	125.1891	CRESENT - TWIN LAKES 138KV CKT 1	
16WP	08ALL	0	FROM->TO	G16_033	G16-032-TAP - COTTONWOOD 138KV CKT 1	268.8	0.10667	107.348	CRESENT - TWIN LAKES 138KV CKT 1	
16WP	08ALL	0	FROM->TO	G16_033	G16-032-TAP - COTTONWOOD 138KV CKT 1	268.8	0.10667	107.0132	COTTONWOOD CREEK - CRESENT 138KV CKT 1	

SEASON	GROUP	SCENARIO	DIRECTION	SOURCE	MONITORED ELEMENT	RATE		CONTINGENCY		CONTINGENCY
						(MVA)	TDF	LOADING %		
20WP	08ALL	0	FROM->TO	G16_033	G16-032-TAP - COTTONWOOD 138KV CKT 1	268.9	0.1065	105.3569	CRESENT - TWIN LAKES 138KV CKT 1	
20WP	08ALL	0	FROM->TO	G16_033	G16-032-TAP - COTTONWOOD 138KV CKT 1	268.9	0.1065	105.0594	COTTONWOOD CREEK - CRESENT 138KV CKT 1	
17G	08ALL	0	FROM->TO	G16_033	G16-032-TAP - COTTONWOOD 138KV CKT 1	220.5	0.10568	128.5457	OTTER - WARREN VALLEY 138KV CKT 1	
20L	08ALL	0	FROM->TO	G16_033	G16-032-TAP - COTTONWOOD 138KV CKT 1	220.3	0.10568	130.9395	CRESENT - TWIN LAKES 138KV CKT 1	
20L	08ALL	0	FROM->TO	G16_033	G16-032-TAP - COTTONWOOD 138KV CKT 1	220.3	0.10568	130.8033	COTTONWOOD CREEK - CRESENT 138KV CKT 1	
17SP	08ALL	0	FROM->TO	G16_033	G16-032-TAP - COTTONWOOD 138KV CKT 1	220.8	0.10555	156.6633	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	
17SP	08ALL	0	FROM->TO	G16_033	G16-032-TAP - COTTONWOOD 138KV CKT 1	220.8	0.10555	148.0582	G15063_T 345.00 - WOODRING 345KV CKT 1	
25SP	08ALL	0	FROM->TO	G16_033	G16-032-TAP - COTTONWOOD 138KV CKT 1	221.1	0.10554	121.1845	OTTER - WARREN VALLEY 138KV CKT 1	
20SP	08ALL	0	FROM->TO	G16_033	G16-032-TAP - COTTONWOOD 138KV CKT 1	221	0.10553	121.6822	OTTER - WARREN VALLEY 138KV CKT 1	
20SP	08ALL	0	FROM->TO	G16_033	G16-032-TAP - COTTONWOOD 138KV CKT 1	221	0.10553	120.913	COW CREEK - WARREN VALLEY 138KV CKT 1	
17G	08ALL	0	FROM->TO	G16_033	G16-032-TAP - COTTONWOOD 138KV CKT 1	220.5	0.10549	160.7642	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	
17G	08ALL	0	FROM->TO	G16_033	G16-032-TAP - COTTONWOOD 138KV CKT 1	220.5	0.10549	152.102	G15063_T 345.00 - WOODRING 345KV CKT 1	
17SP	08ALL	0	FROM->TO	G16_033	G16-032-TAP - COTTONWOOD 138KV CKT 1	220.8	0.10548	125.9591	OTTER - WARREN VALLEY 138KV CKT 1	
17SP	08ALL	0	FROM->TO	G16_033	G16-032-TAP - COTTONWOOD 138KV CKT 1	220.8	0.10548	125.2798	COW CREEK - WARREN VALLEY 138KV CKT 1	
16WP	08ALL	0	FROM->TO	G16_033	G16-032-TAP - COTTONWOOD 138KV CKT 1	268.8	0.10527	107.2729	OTTER - WARREN VALLEY 138KV CKT 1	
20WP	08ALL	0	FROM->TO	G16_033	G16-032-TAP - COTTONWOOD 138KV CKT 1	268.9	0.10512	106.0493	OTTER - WARREN VALLEY 138KV CKT 1	
20WP	08ALL	0	FROM->TO	G16_033	G16-032-TAP - COTTONWOOD 138KV CKT 1	268.9	0.10512	105.603	COW CREEK - WARREN VALLEY 138KV CKT 1	
20SP	08ALL	0	FROM->TO	G16_033	G16-032-TAP - COTTONWOOD 138KV CKT 1	221	0.10508	148.1735	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	
20SP	08ALL	0	FROM->TO	G16_033	G16-032-TAP - COTTONWOOD 138KV CKT 1	221	0.10508	139.893	G15063_T 345.00 - WOODRING 345KV CKT 1	
16WP	08ALL	0	FROM->TO	G16_033	G16-032-TAP - COTTONWOOD 138KV CKT 1	268.8	0.10502	134.3321	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	
16WP	08ALL	0	FROM->TO	G16_033	G16-032-TAP - COTTONWOOD 138KV CKT 1	268.8	0.10502	127.2637	G15063_T 345.00 - WOODRING 345KV CKT 1	
25SP	08ALL	0	FROM->TO	G16_033	G16-032-TAP - COTTONWOOD 138KV CKT 1	221.1	0.10501	152.4263	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	
25SP	08ALL	0	FROM->TO	G16_033	G16-032-TAP - COTTONWOOD 138KV CKT 1	221.1	0.10501	144.2399	G15063_T 345.00 - WOODRING 345KV CKT 1	
20L	08ALL	0	FROM->TO	G16_033	G16-032-TAP - COTTONWOOD 138KV CKT 1	220.3	0.10479	131.4863	OTTER - WARREN VALLEY 138KV CKT 1	
20L	08ALL	0	FROM->TO	G16_033	G16-032-TAP - COTTONWOOD 138KV CKT 1	220.3	0.10479	130.8508	COW CREEK - WARREN VALLEY 138KV CKT 1	
20WP	08ALL	0	FROM->TO	G16_033	G16-032-TAP - COTTONWOOD 138KV CKT 1	268.9	0.10446	129.3661	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	
20WP	08ALL	0	FROM->TO	G16_033	G16-032-TAP - COTTONWOOD 138KV CKT 1	268.9	0.10446	122.5978	G15063_T 345.00 - WOODRING 345KV CKT 1	
20L	08ALL	0	FROM->TO	G16_033	G16-032-TAP - COTTONWOOD 138KV CKT 1	220.3	0.10269	159.0099	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	
20L	08ALL	0	FROM->TO	G16_033	G16-032-TAP - COTTONWOOD 138KV CKT 1	220.3	0.10269	150.7485	G15063_T 345.00 - WOODRING 345KV CKT 1	
25SP	08ALL	0	FROM->TO	G16_033	G16-032-TAP - COTTONWOOD 138KV CKT 1	221.1	0.09808	131.1186	P12:138:OKGE:3TERM2	
20SP	08ALL	0	FROM->TO	G16_033	G16-032-TAP - COTTONWOOD 138KV CKT 1	221	0.09806	131.1134	P12:138:OKGE:3TERM2	
17SP	08ALL	0	FROM->TO	G16_033	G16-032-TAP - COTTONWOOD 138KV CKT 1	220.8	0.0979	135.5675	P12:138:OKGE:3TERM2	
17G	08ALL	0	FROM->TO	G16_033	G16-032-TAP - COTTONWOOD 138KV CKT 1	220.5	0.09786	136.9021	P12:138:OKGE:3TERM2	
16WP	08ALL	0	FROM->TO	G16_033	G16-032-TAP - COTTONWOOD 138KV CKT 1	268.8	0.09753	114.5631	P12:138:OKGE:3TERM2	
20WP	08ALL	0	FROM->TO	G16_033	G16-032-TAP - COTTONWOOD 138KV CKT 1	268.9	0.09749	113.48	P12:138:OKGE:3TERM2	
25SP	08ALL	0	FROM->TO	G16_033	G16-032-TAP - COTTONWOOD 138KV CKT 1	221.1	0.097	131.4583	MORISNT4 138.00 - STILLWATER 138KV CKT 1	
20SP	08ALL	0	FROM->TO	G16_033	G16-032-TAP - COTTONWOOD 138KV CKT 1	221	0.09697	131.3627	MORISNT4 138.00 - STILLWATER 138KV CKT 1	
17SP	08ALL	0	FROM->TO	G16_033	G16-032-TAP - COTTONWOOD 138KV CKT 1	220.8	0.09694	130.4296	VIOLA 7 345.00 - WICHITA 345KV CKT 1	
17SP	08ALL	0	FROM->TO	G16_033	G16-032-TAP - COTTONWOOD 138KV CKT 1	220.8	0.09681	135.7814	MORISNT4 138.00 - STILLWATER 138KV CKT 1	
17G	08ALL	0	FROM->TO	G16_033	G16-032-TAP - COTTONWOOD 138KV CKT 1	220.5	0.09676	133.2548	VIOLA 7 345.00 - WICHITA 345KV CKT 1	
17G	08ALL	0	FROM->TO	G16_033	G16-032-TAP - COTTONWOOD 138KV CKT 1	220.5	0.09675	137.042	MORISNT4 138.00 - STILLWATER 138KV CKT 1	
16WP	08ALL	0	FROM->TO	G16_033	G16-032-TAP - COTTONWOOD 138KV CKT 1	268.8	0.09652	111.1216	VIOLA 7 345.00 - WICHITA 345KV CKT 1	
16WP	08ALL	0	FROM->TO	G16_033	G16-032-TAP - COTTONWOOD 138KV CKT 1	268.8	0.09643	114.6937	MORISNT4 138.00 - STILLWATER 138KV CKT 1	
20WP	08ALL	0	FROM->TO	G16_033	G16-032-TAP - COTTONWOOD 138KV CKT 1	268.9	0.0964	113.6105	MORISNT4 138.00 - STILLWATER 138KV CKT 1	
20SP	08ALL	0	FROM->TO	G16_033	G16-032-TAP - COTTONWOOD 138KV CKT 1	221	0.09631	120.6328	COW CREEK - MORRISON 138KV CKT 1	
20SP	08ALL	0	FROM->TO	G16_033	G16-032-TAP - COTTONWOOD 138KV CKT 1	221	0.09631	120.5423	MORISNT4 138.00 - MORRISON 138KV CKT 1	
25SP	08ALL	0	FROM->TO	G16_033	G16-032-TAP - COTTONWOOD 138KV CKT 1	221.1	0.09631	120.8043	COW CREEK - MORRISON 138KV CKT 1	
25SP	08ALL	0	FROM->TO	G16_033	G16-032-TAP - COTTONWOOD 138KV CKT 1	221.1	0.09631	120.7139	MORISNT4 138.00 - MORRISON 138KV CKT 1	
17G	08ALL	0	FROM->TO	G16_033	G16-032-TAP - COTTONWOOD 138KV CKT 1	220.5	0.09585	134.402	CLEVELAND - G15066_T 345.00 345KV CKT 1	
17G	08ALL	0	FROM->TO	G16_033	G16-032-TAP - COTTONWOOD 138KV CKT 1	220.5	0.09585	132.1345	G15066_T 345.00 - SOONER 345KV CKT 1	
20WP	08ALL	0	FROM->TO	G16_033	G16-032-TAP - COTTONWOOD 138KV CKT 1	268.9	0.09582	104.9668	COW CREEK - MORRISON 138KV CKT 1	
20WP	08ALL	0	FROM->TO	G16_033	G16-032-TAP - COTTONWOOD 138KV CKT 1	268.9	0.09582	104.9296	MORISNT4 138.00 - MORRISON 138KV CKT 1	
17SP	08ALL	0	FROM->TO	G16_033	G16-032-TAP - COTTONWOOD 138KV CKT 1	220.8	0.09578	131.978	CLEVELAND - G15066_T 345.00 345KV CKT 1	
17SP	08ALL	0	FROM->TO	G16_033	G16-032-TAP - COTTONWOOD 138KV CKT 1	220.8	0.09578	129.6683	G15066_T 345.00 - SOONER 345KV CKT 1	
25SP	08ALL	0	FROM->TO	G16_033	G16-032-TAP - COTTONWOOD 138KV CKT 1	221.1	0.09575	126.4851	CLEVELAND - G15066_T 345.00 345KV CKT 1	

SEASON	GROUP	SCENARIO	DIRECTION	SOURCE	MONITORED ELEMENT	RATE		CONTINGENCY		CONTINGENCY
						(MVA)	TDF	LOADING %		
25SP	08ALL	0	FROM->TO	G16_033	G16-032-TAP - COTTONWOOD 138KV CKT 1	221.1	0.09575	124.1784	G15066_T 345.00 - SOONER 345KV CKT 1	
20SP	08ALL	0	FROM->TO	G16_033	G16-032-TAP - COTTONWOOD 138KV CKT 1	221	0.0957	127.5349	CLEVELAND - G15066_T 345.00 345KV CKT 1	
20SP	08ALL	0	FROM->TO	G16_033	G16-032-TAP - COTTONWOOD 138KV CKT 1	221	0.0957	125.2725	G15066_T 345.00 - SOONER 345KV CKT 1	
20L	08ALL	0	FROM->TO	G16_033	G16-032-TAP - COTTONWOOD 138KV CKT 1	220.3	0.09559	137.7687	P12:138:OKGE:3TERM2	
16WP	08ALL	0	FROM->TO	G16_033	G16-032-TAP - COTTONWOOD 138KV CKT 1	268.8	0.09553	111.9329	CLEVELAND - G15066_T 345.00 345KV CKT 1	
16WP	08ALL	0	FROM->TO	G16_033	G16-032-TAP - COTTONWOOD 138KV CKT 1	268.8	0.09553	110.0355	G15066_T 345.00 - SOONER 345KV CKT 1	
20WP	08ALL	0	FROM->TO	G16_033	G16-032-TAP - COTTONWOOD 138KV CKT 1	268.9	0.09525	110.4852	CLEVELAND - G15066_T 345.00 345KV CKT 1	
20WP	08ALL	0	FROM->TO	G16_033	G16-032-TAP - COTTONWOOD 138KV CKT 1	268.9	0.09525	108.6257	G15066_T 345.00 - SOONER 345KV CKT 1	
25SP	08ALL	0	FROM->TO	G16_033	G16-032-TAP - COTTONWOOD 138KV CKT 1	221.1	0.09511	121.1827	VIOLA 7 345.00 - WICHITA 345KV CKT 1	
20SP	08ALL	0	FROM->TO	G16_033	G16-032-TAP - COTTONWOOD 138KV CKT 1	221	0.0951	121.0565	VIOLA 7 345.00 - WICHITA 345KV CKT 1	
17G	08ALL	0	FROM->TO	G16_033	G16-032-TAP - COTTONWOOD 138KV CKT 1	220.5	0.09491	129.1874	P12:345:AEPW-GRDA:T.NO.-7:CLEVLND7	
17SP	08ALL	0	FROM->TO	G16_033	G16-032-TAP - COTTONWOOD 138KV CKT 1	220.8	0.0949	130.384	STILLWATER - UNVRSTY4 138.00 138KV CKT 1	
17SP	08ALL	0	FROM->TO	G16_033	G16-032-TAP - COTTONWOOD 138KV CKT 1	220.8	0.0949	130.067	MCELROY - UNVRSTY4 138.00 138KV CKT 1	
17SP	08ALL	0	FROM->TO	G16_033	G16-032-TAP - COTTONWOOD 138KV CKT 1	220.8	0.0949	129.0706	KINZE - MCELROY 138KV CKT 1	
17SP	08ALL	0	FROM->TO	G16_033	G16-032-TAP - COTTONWOOD 138KV CKT 1	220.8	0.09486	126.4275	P12:345:AEPW-GRDA:T.NO.-7:CLEVLND7	
25SP	08ALL	0	FROM->TO	G16_033	G16-032-TAP - COTTONWOOD 138KV CKT 1	221.1	0.09484	121.5849	P12:345:AEPW-GRDA:T.NO.-7:CLEVLND7	
17G	08ALL	0	FROM->TO	G16_033	G16-032-TAP - COTTONWOOD 138KV CKT 1	220.5	0.09483	131.9451	STILLWATER - UNVRSTY4 138.00 138KV CKT 1	
17G	08ALL	0	FROM->TO	G16_033	G16-032-TAP - COTTONWOOD 138KV CKT 1	220.5	0.09483	131.809	MCELROY - UNVRSTY4 138.00 138KV CKT 1	
17G	08ALL	0	FROM->TO	G16_033	G16-032-TAP - COTTONWOOD 138KV CKT 1	220.5	0.09483	131.1741	KINZE - MCELROY 138KV CKT 1	
20SP	08ALL	0	FROM->TO	G16_033	G16-032-TAP - COTTONWOOD 138KV CKT 1	221	0.09481	122.0182	P12:345:AEPW-GRDA:T.NO.-7:CLEVLND7	
20L	08ALL	0	FROM->TO	G16_033	G16-032-TAP - COTTONWOOD 138KV CKT 1	220.3	0.09477	128.6427	COW CREEK - MORRISON 138KV CKT 1	
20WP	08ALL	0	FROM->TO	G16_033	G16-032-TAP - COTTONWOOD 138KV CKT 1	268.9	0.09462	105.2114	VIOLA 7 345.00 - WICHITA 345KV CKT 1	
16WP	08ALL	0	FROM->TO	G16_033	G16-032-TAP - COTTONWOOD 138KV CKT 1	268.8	0.09457	107.6845	P12:345:AEPW-GRDA:T.NO.-7:CLEVLND7	
16WP	08ALL	0	FROM->TO	G16_033	G16-032-TAP - COTTONWOOD 138KV CKT 1	268.8	0.0945	110.5791	STILLWATER - UNVRSTY4 138.00 138KV CKT 1	
16WP	08ALL	0	FROM->TO	G16_033	G16-032-TAP - COTTONWOOD 138KV CKT 1	268.8	0.0945	110.4303	MCELROY - UNVRSTY4 138.00 138KV CKT 1	
16WP	08ALL	0	FROM->TO	G16_033	G16-032-TAP - COTTONWOOD 138KV CKT 1	268.8	0.0945	109.8723	KINZE - MCELROY 138KV CKT 1	
20L	08ALL	0	FROM->TO	G16_033	G16-032-TAP - COTTONWOOD 138KV CKT 1	220.3	0.0944	137.6953	MORISNT4 138.00 - STILLWATER 138KV CKT 1	
20SP	08ALL	0	FROM->TO	G16_033	G16-032-TAP - COTTONWOOD 138KV CKT 1	221	0.09411	125.0548	SOONER - SPRING CREEK 345KV CKT 1	
25SP	08ALL	0	FROM->TO	G16_033	G16-032-TAP - COTTONWOOD 138KV CKT 1	221.1	0.09408	126.9498	SOONER - SPRING CREEK 345KV CKT 1	
17SP	08ALL	0	FROM->TO	G16_033	G16-032-TAP - COTTONWOOD 138KV CKT 1	220.8	0.09406	130.1432	SOONER - SPRING CREEK 345KV CKT 1	
20SP	08ALL	0	FROM->TO	G16_033	G16-032-TAP - COTTONWOOD 138KV CKT 1	221	0.09406	127.1333	NORTHWEST - SPRING CREEK 345KV CKT 1	
25SP	08ALL	0	FROM->TO	G16_033	G16-032-TAP - COTTONWOOD 138KV CKT 1	221.1	0.09403	128.9369	NORTHWEST - SPRING CREEK 345KV CKT 1	
17SP	08ALL	0	FROM->TO	G16_033	G16-032-TAP - COTTONWOOD 138KV CKT 1	220.8	0.09401	132.2236	NORTHWEST - SPRING CREEK 345KV CKT 1	
17G	08ALL	0	FROM->TO	G16_033	G16-032-TAP - COTTONWOOD 138KV CKT 1	220.5	0.09396	133.1716	SOONER - SPRING CREEK 345KV CKT 1	
17G	08ALL	0	FROM->TO	G16_033	G16-032-TAP - COTTONWOOD 138KV CKT 1	220.5	0.09396	133.0355	NORTHWEST - SPRING CREEK 345KV CKT 1	
20L	08ALL	0	FROM->TO	G16_033	G16-032-TAP - COTTONWOOD 138KV CKT 1	220.3	0.09381	131.24	ARCADIA - NORTHWEST 345KV CKT 1	
20SP	08ALL	0	FROM->TO	G16_033	G16-032-TAP - COTTONWOOD 138KV CKT 1	221	0.0938	120.6134	STILLWATER - UNVRSTY4 138.00 138KV CKT 1	
20SP	08ALL	0	FROM->TO	G16_033	G16-032-TAP - COTTONWOOD 138KV CKT 1	221	0.0938	120.4777	MCELROY - UNVRSTY4 138.00 138KV CKT 1	
25SP	08ALL	0	FROM->TO	G16_033	G16-032-TAP - COTTONWOOD 138KV CKT 1	221.1	0.0938	121.0208	STILLWATER - UNVRSTY4 138.00 138KV CKT 1	
25SP	08ALL	0	FROM->TO	G16_033	G16-032-TAP - COTTONWOOD 138KV CKT 1	221.1	0.0938	120.8851	MCELROY - UNVRSTY4 138.00 138KV CKT 1	
25SP	08ALL	0	FROM->TO	G16_033	G16-032-TAP - COTTONWOOD 138KV CKT 1	221.1	0.0938	120.3424	KINZE - MCELROY 138KV CKT 1	
16WP	08ALL	0	FROM->TO	G16_033	G16-032-TAP - COTTONWOOD 138KV CKT 1	268.8	0.09358	111.4048	SOONER - SPRING CREEK 345KV CKT 1	
16WP	08ALL	0	FROM->TO	G16_033	G16-032-TAP - COTTONWOOD 138KV CKT 1	268.8	0.09358	111.256	NORTHWEST - SPRING CREEK 345KV CKT 1	
20L	08ALL	0	FROM->TO	G16_033	G16-032-TAP - COTTONWOOD 138KV CKT 1	220.3	0.09353	128.9577	VIOLA 7 345.00 - WICHITA 345KV CKT 1	
20WP	08ALL	0	FROM->TO	G16_033	G16-032-TAP - COTTONWOOD 138KV CKT 1	268.9	0.09352	109.1914	SOONER - SPRING CREEK 345KV CKT 1	
20WP	08ALL	0	FROM->TO	G16_033	G16-032-TAP - COTTONWOOD 138KV CKT 1	268.9	0.09352	109.0798	NORTHWEST - SPRING CREEK 345KV CKT 1	
20L	08ALL	0	FROM->TO	G16_033	G16-032-TAP - COTTONWOOD 138KV CKT 1	220.3	0.0935	136.8455	CLEVELAND - G15066_T 345.00 345KV CKT 1	
20L	08ALL	0	FROM->TO	G16_033	G16-032-TAP - COTTONWOOD 138KV CKT 1	220.3	0.0935	134.5758	G15066_T 345.00 - SOONER 345KV CKT 1	
20L	08ALL	0	FROM->TO	G16_033	G16-032-TAP - COTTONWOOD 138KV CKT 1	220.3	0.09295	131.2766	P12:345:AEPW-GRDA:T.NO.-7:CLEVLND7	
20L	08ALL	0	FROM->TO	G16_033	G16-032-TAP - COTTONWOOD 138KV CKT 1	220.3	0.09209	132.9879	SOONER - SPRING CREEK 345KV CKT 1	
20L	08ALL	0	FROM->TO	G16_033	G16-032-TAP - COTTONWOOD 138KV CKT 1	220.3	0.09209	132.8518	NORTHWEST - SPRING CREEK 345KV CKT 1	
17SP	08ALL	0	FROM->TO	G16_010A	G16-032-TAP - COTTONWOOD 138KV CKT 1	220.8	0.0312	130.4296	VIOLA 7 345.00 - WICHITA 345KV CKT 1	
17G	08ALL	0	FROM->TO	G16_010A	G16-032-TAP - COTTONWOOD 138KV CKT 1	220.5	0.03103	133.2548	VIOLA 7 345.00 - WICHITA 345KV CKT 1	
16WP	08ALL	0	FROM->TO	G16_010A	G16-032-TAP - COTTONWOOD 138KV CKT 1	268.8	0.03078	111.1216	VIOLA 7 345.00 - WICHITA 345KV CKT 1	
20L	08NR	0	FROM->TO	G16_033	G16-032-TAP - COTTONWOOD 138KV CKT 1	220.8	0.097	116.2635	DBL-TGA-MATT	

SEASON	GROUP	SCENARIO	DIRECTION	SOURCE	MONITORED ELEMENT	RATE		CONTINGENCY		CONTINGENCY
						(MVA)	TDF	LOADING %		
17SP	16ALL	2	FROM->TO	G16_035	G16-035-TAP 230.00 - L3 HAWDON 230KV CKT 1	263.4	0.1831	119.2789	G16-017-TAP 345.00 - G16035-TAPII345.00 345KV CKT 1	
17SP	16ALL	2	FROM->TO	G16_035	G16-035-TAP 230.00 - L3 HAWDON 230KV CKT 1	263.4	0.1831	119.165	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1	
17SP	16ALL	2	FROM->TO	G16_035	G16-035-TAP 230.00 - L3 HAWDON 230KV CKT 1	263.4	0.1831	119.165	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z	
17G	16ALL	2	FROM->TO	G16_035	G16-035-TAP 230.00 - L3 HAWDON 230KV CKT 1	263.7	0.18148	110.4402	G16-017-TAP 345.00 - G16035-TAPII345.00 345KV CKT 1	
17G	16ALL	2	FROM->TO	G16_035	G16-035-TAP 230.00 - L3 HAWDON 230KV CKT 1	263.7	0.18148	110.3264	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1	
17G	16ALL	2	FROM->TO	G16_035	G16-035-TAP 230.00 - L3 HAWDON 230KV CKT 1	263.7	0.18148	110.3264	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z	
25SP	16ALL	2	FROM->TO	G16_035	G16-035-TAP 230.00 - L3 HAWDON 230KV CKT 1	263.2	0.18007	112.5634	G16-017-TAP 345.00 - G16035-TAPII345.00 345KV CKT 1	
25SP	16ALL	2	FROM->TO	G16_035	G16-035-TAP 230.00 - L3 HAWDON 230KV CKT 1	263.2	0.18007	112.4874	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1	
25SP	16ALL	2	FROM->TO	G16_035	G16-035-TAP 230.00 - L3 HAWDON 230KV CKT 1	263.2	0.18007	112.4874	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z	
20SP	16ALL	2	FROM->TO	G16_035	G16-035-TAP 230.00 - L3 HAWDON 230KV CKT 1	263.7	0.17996	109.0168	G16-017-TAP 345.00 - G16035-TAPII345.00 345KV CKT 1	
20SP	16ALL	2	FROM->TO	G16_035	G16-035-TAP 230.00 - L3 HAWDON 230KV CKT 1	263.7	0.17996	108.941	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z	
20SP	16ALL	2	FROM->TO	G16_035	G16-035-TAP 230.00 - L3 HAWDON 230KV CKT 1	263.7	0.17996	108.941	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1	
20L	16ALL	2	FROM->TO	G16_035	G16-035-TAP 230.00 - L3 HAWDON 230KV CKT 1	264	0.17856	103.2634	G16-017-TAP 345.00 - G16035-TAPII345.00 345KV CKT 1	
20L	16ALL	2	FROM->TO	G16_035	G16-035-TAP 230.00 - L3 HAWDON 230KV CKT 1	264	0.17856	103.1877	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z	
20L	16ALL	2	FROM->TO	G16_035	G16-035-TAP 230.00 - L3 HAWDON 230KV CKT 1	264	0.17856	103.1877	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1	
17SP	16ALL	2	FROM->TO	G16_035	G16-035-TAP 230.00 - L3 HAWDON 230KV CKT 1	263.4	0.16422	103.7435	P12:345:UMZB:# 102 #: AVS BD IN ND. AVS BRD LR	
17SP	16ALL	2	FROM->TO	G16_035	G16-035-TAP 230.00 - L3 HAWDON 230KV CKT 1	263.4	0.16422	103.7435	P12:345:UMZB:# 103 #: BD IN SD. LOSS OF LINE	
17SP	16ALL	2	FROM->TO	G16_035	G16-035-TAP 230.00 - L3 HAWDON 230KV CKT 1	263.4	0.16422	103.4777	P13:345:UMZB:# 244 #: BD IN SD. LOSS OF TX	
17SP	16ALL	2	FROM->TO	G16_035	G16-035-TAP 230.00 - L3 HAWDON 230KV CKT 1	263.4	0.16422	103.8194	ANTELOP-LNX3345.00 - ANTELOPE VALLEY 345KV CKT Z	
17SP	16ALL	2	FROM->TO	G16_035	G16-035-TAP 230.00 - L3 HAWDON 230KV CKT 1	263.4	0.16422	103.4777	BRDLAND-LNX3345.00 - HURON 345KV CKT Z	
17SP	16ALL	2	FROM->TO	G16_035	G16-035-TAP 230.00 - L3 HAWDON 230KV CKT 1	263.4	0.16422	103.4777	ANTELOP-LNX3345.00 - BRDLAND-LNX3345.00 345KV CKT 1	
17SP	16ALL	2	FROM->TO	G16_035	G16-035-TAP 230.00 - L3 HAWDON 230KV CKT 1	263.4	0.16422	103.4777	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	
17SP	16ALL	2	FROM->TO	G16_035	G16-035-TAP 230.00 - L3 HAWDON 230KV CKT 1	263.4	0.16422	103.4398	BROADLAND - HURON 230KV CKT 1	
17SP	16ALL	2	FROM->TO	G16_035	G16-035-TAP 230.00 - L3 HAWDON 230KV CKT 1	263.4	0.1635	100.9484	BISON - HETINGER 230KV CKT 1	
17SP	16ALL	2	FROM->TO	G16_035	G16-035-TAP 230.00 - L3 HAWDON 230KV CKT 1	263.4	0.1635	100.265	BISON - MAURINE 230KV CKT 1	
17SP	16ALL	2	FROM->TO	G16_035	G16-035-TAP 230.00 - L3 HAWDON 230KV CKT 1	263.4	0.16242	102.7075	GROTON - GROTON-LNX3 345.00 345KV CKT Z	
17SP	16ALL	2	FROM->TO	G16_035	G16-035-TAP 230.00 - L3 HAWDON 230KV CKT 1	263.4	0.16242	102.7075	G16-044-TAP 345.00 - GROTON-LNX3 345.00 345KV CKT 1	
17SP	16ALL	2	FROM->TO	G16_035	G16-035-TAP 230.00 - L3 HAWDON 230KV CKT 1	263.4	0.15967	107.9077	RIEL - ROSEAU 500KV CKT 1	
17SP	16ALL	2	FROM->TO	G16_035	G16-035-TAP 230.00 - L3 HAWDON 230KV CKT 1	263.4	0.15967	107.4142	ROSEAU - ROSEAU 2 500.00 500KV CKT 1	
17SP	16ALL	2	FROM->TO	G16_035	G16-035-TAP 230.00 - L3 HAWDON 230KV CKT 1	263.4	0.15967	107.4142	ROSEAU - ROSEAU 2 500.00 500KV CKT 1	
17SP	16ALL	2	FROM->TO	G16_035	G16-035-TAP 230.00 - L3 HAWDON 230KV CKT 1	263.4	0.15967	106.9206	FORBES - ROSEAU 500KV CKT 1	
25SP	16ALL	2	FROM->TO	G16_035	G16-035-TAP 230.00 - L3 HAWDON 230KV CKT 1	263.2	0.15726	101.0082	RIEL - ROSEAU 500KV CKT 1	
25SP	16ALL	2	FROM->TO	G16_035	G16-035-TAP 230.00 - L3 HAWDON 230KV CKT 1	263.2	0.15726	100.5903	ROSEAU - ROSEAU 2 500.00 500KV CKT 1	
25SP	16ALL	2	FROM->TO	G16_035	G16-035-TAP 230.00 - L3 HAWDON 230KV CKT 1	263.2	0.15726	100.5903	ROSEAU - ROSEAU 2 500.00 500KV CKT 1	
25SP	16ALL	2	FROM->TO	G16_035	G16-035-TAP 230.00 - L3 HAWDON 230KV CKT 1	263.2	0.15726	100.1724	FORBES - ROSEAU 500KV CKT 1	
17SP	03ALL	0	FROM->TO	G16_010B	GILL ENERGY CENTER EAST (MURR TX-3) 138/69/14.4KV TRANSFORMER CKT 1	137.4	0.10549	130.9301	GILL ENERGY CENTER SOUTH - GILL ENERGY CENTER WEST 138KV CKT Z1	
17SP	03ALL	4	FROM->TO	G16_010B	GILL ENERGY CENTER EAST (MURR TX-3) 138/69/14.4KV TRANSFORMER CKT 1	137.5	0.06035	107.0434	GILL ENERGY CENTER SOUTH - GILL ENERGY CENTER WEST 138KV CKT Z1	
17SP	03ALL	3	FROM->TO	G16_010B	GILL ENERGY CENTER EAST (MURR TX-3) 138/69/14.4KV TRANSFORMER CKT 1	137.5	0.05432	104.9933	GILL ENERGY CENTER SOUTH - GILL ENERGY CENTER WEST 138KV CKT Z1	
17SP	03ALL	2	FROM->TO	G16_010B	GILL ENERGY CENTER EAST (MURR TX-3) 138/69/14.4KV TRANSFORMER CKT 1	137.5	0.05076	103.5666	GILL ENERGY CENTER SOUTH - GILL ENERGY CENTER WEST 138KV CKT Z1	
16WP	16ALL	2	TO->FROM	G16_035	GLENHAM - L3 HAWDON 230KV CKT 1	263.5	0.18346	104.1031	G16-017-TAP 345.00 - G16035-TAPII345.00 345KV CKT 1	
16WP	16ALL	2	TO->FROM	G16_035	GLENHAM - L3 HAWDON 230KV CKT 1	263.5	0.18346	104.0273	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1	
16WP	16ALL	2	TO->FROM	G16_035	GLENHAM - L3 HAWDON 230KV CKT 1	263.5	0.18346	104.0273	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z	
17SP	16ALL	2	TO->FROM	G16_035	GLENHAM - L3 HAWDON 230KV CKT 1	263.8	0.1831	125.5423	G16-017-TAP 345.00 - G16035-TAPII345.00 345KV CKT 1	
17SP	16ALL	2	TO->FROM	G16_035	GLENHAM - L3 HAWDON 230KV CKT 1	263.8	0.1831	125.3907	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1	
17SP	16ALL	2	TO->FROM	G16_035	GLENHAM - L3 HAWDON 230KV CKT 1	263.8	0.1831	125.3907	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z	
17G	16ALL	2	TO->FROM	G16_035	GLENHAM - L3 HAWDON 230KV CKT 1	264	0.18148	122.4359	G16-017-TAP 345.00 - G16035-TAPII345.00 345KV CKT 1	
17G	16ALL	2	TO->FROM	G16_035	GLENHAM - L3 HAWDON 230KV CKT 1	264	0.18148	122.3223	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z	
17G	16ALL	2	TO->FROM	G16_035	GLENHAM - L3 HAWDON 230KV CKT 1	264	0.18148	122.3223	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1	
25SP	16ALL	2	TO->FROM	G16_035	GLENHAM - L3 HAWDON 230KV CKT 1	263.8	0.18007	119.9647	G16-017-TAP 345.00 - G16035-TAPII345.00 345KV CKT 1	
25SP	16ALL	2	TO->FROM	G16_035	GLENHAM - L3 HAWDON 230KV CKT 1	263.8	0.18007	119.8889	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1	
25SP	16ALL	2	TO->FROM	G16_035	GLENHAM - L3 HAWDON 230KV CKT 1	263.8	0.18007	119.8889	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z	
20SP	16ALL	2	TO->FROM	G16_035	GLENHAM - L3 HAWDON 230KV CKT 1	264	0.17996	115.5596	G16-017-TAP 345.00 - G16035-TAPII345.00 345KV CKT 1	
20SP	16ALL	2	TO->FROM	G16_035	GLENHAM - L3 HAWDON 230KV CKT 1	264	0.17996	115.4839	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z	
20SP	16ALL	2	TO->FROM	G16_035	GLENHAM - L3 HAWDON 230KV CKT 1	264	0.17996	115.4839	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1	
20L	16ALL	2	TO->FROM	G16_035	GLENHAM - L3 HAWDON 230KV CKT 1	263.6	0.17856	115.6356	G16-017-TAP 345.00 - G16035-TAPII345.00 345KV CKT 1	

SEASON	GROUP	SCENARIO	DIRECTION	SOURCE	MONITORED ELEMENT	RATE		CONTINGENCY		CONTINGENCY
						(MVA)	TDF	LOADING %		
20L	16ALL	2	TO->FROM	G16_035	GLENHAM - L3 HAWDON 230KV CKT 1	263.6	0.17856	115.5597	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1	
20L	16ALL	2	TO->FROM	G16_035	GLENHAM - L3 HAWDON 230KV CKT 1	263.6	0.17856	115.5597	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z	
17SP	16ALL	2	TO->FROM	G16_035	GLENHAM - L3 HAWDON 230KV CKT 1	263.8	0.16422	110.0304	P12:345:UMZB:# 102 #: AVS BD IN ND. AVS BRD LR	
17SP	16ALL	2	TO->FROM	G16_035	GLENHAM - L3 HAWDON 230KV CKT 1	263.8	0.16422	110.0304	P12:345:UMZB:# 103 #: BD IN SD. LOSS OF LINE	
17SP	16ALL	2	TO->FROM	G16_035	GLENHAM - L3 HAWDON 230KV CKT 1	263.8	0.16422	109.7272	P13:345:UMZB:# 244 #: BD IN SD. LOSS OF TX	
17SP	16ALL	2	TO->FROM	G16_035	GLENHAM - L3 HAWDON 230KV CKT 1	263.8	0.16422	110.1063	ANTELOP-LNX3345.00 - ANTELOPE VALLEY 345KV CKT Z	
17SP	16ALL	2	TO->FROM	G16_035	GLENHAM - L3 HAWDON 230KV CKT 1	263.8	0.16422	109.7272	BRDLAND-LNX3345.00 - HURON 345KV CKT Z	
17SP	16ALL	2	TO->FROM	G16_035	GLENHAM - L3 HAWDON 230KV CKT 1	263.8	0.16422	109.7272	ANTELOP-LNX3345.00 - BRDLAND-LNX3345.00 345KV CKT 1	
17SP	16ALL	2	TO->FROM	G16_035	GLENHAM - L3 HAWDON 230KV CKT 1	263.8	0.16422	109.7272	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	
17SP	16ALL	2	TO->FROM	G16_035	GLENHAM - L3 HAWDON 230KV CKT 1	263.8	0.16422	109.6893	BROADLAND - HURON 230KV CKT 1	
17SP	16ALL	2	TO->FROM	G16_035	GLENHAM - L3 HAWDON 230KV CKT 1	263.8	0.1635	107.2396	BISON - HETINGER 230KV CKT 1	
17SP	16ALL	2	TO->FROM	G16_035	GLENHAM - L3 HAWDON 230KV CKT 1	263.8	0.1635	106.5193	BISON - MAURINE 230KV CKT 1	
17G	16ALL	2	TO->FROM	G16_035	GLENHAM - L3 HAWDON 230KV CKT 1	264	0.16291	107.4954	P12:345:UMZB:# 102 #: AVS BD IN ND. AVS BRD LR	
17G	16ALL	2	TO->FROM	G16_035	GLENHAM - L3 HAWDON 230KV CKT 1	264	0.16291	107.4954	P12:345:UMZB:# 103 #: BD IN SD. LOSS OF LINE	
17G	16ALL	2	TO->FROM	G16_035	GLENHAM - L3 HAWDON 230KV CKT 1	264	0.16291	107.2681	P13:345:UMZB:# 244 #: BD IN SD. LOSS OF TX	
17G	16ALL	2	TO->FROM	G16_035	GLENHAM - L3 HAWDON 230KV CKT 1	264	0.16291	107.5333	ANTELOP-LNX3345.00 - ANTELOPE VALLEY 345KV CKT Z	
17G	16ALL	2	TO->FROM	G16_035	GLENHAM - L3 HAWDON 230KV CKT 1	264	0.16291	107.2681	ANTELOP-LNX3345.00 - BRDLAND-LNX3345.00 345KV CKT 1	
17G	16ALL	2	TO->FROM	G16_035	GLENHAM - L3 HAWDON 230KV CKT 1	264	0.16291	107.2681	BRDLAND-LNX3345.00 - HURON 345KV CKT Z	
17G	16ALL	2	TO->FROM	G16_035	GLENHAM - L3 HAWDON 230KV CKT 1	264	0.16291	107.2681	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	
17G	16ALL	2	TO->FROM	G16_035	GLENHAM - L3 HAWDON 230KV CKT 1	264	0.16291	107.2302	BROADLAND - HURON 230KV CKT 1	
17SP	16ALL	2	TO->FROM	G16_035	GLENHAM - L3 HAWDON 230KV CKT 1	263.8	0.16242	108.9582	GROTON - GROTON-LNX3 345.00 345KV CKT Z	
17SP	16ALL	2	TO->FROM	G16_035	GLENHAM - L3 HAWDON 230KV CKT 1	263.8	0.16242	108.9582	G16-044-TAP 345.00 - GROTON-LNX3 345.00 345KV CKT 1	
17G	16ALL	2	TO->FROM	G16_035	GLENHAM - L3 HAWDON 230KV CKT 1	264	0.16226	103.6698	BISON - HETINGER 230KV CKT 1	
17G	16ALL	2	TO->FROM	G16_035	GLENHAM - L3 HAWDON 230KV CKT 1	264	0.16226	102.9501	BISON - MAURINE 230KV CKT 1	
25SP	16ALL	2	TO->FROM	G16_035	GLENHAM - L3 HAWDON 230KV CKT 1	263.8	0.16172	105.4502	P12:345:UMZB:# 102 #: AVS BD IN ND. AVS BRD LR	
25SP	16ALL	2	TO->FROM	G16_035	GLENHAM - L3 HAWDON 230KV CKT 1	263.8	0.16172	105.4502	P12:345:UMZB:# 103 #: BD IN SD. LOSS OF LINE	
25SP	16ALL	2	TO->FROM	G16_035	GLENHAM - L3 HAWDON 230KV CKT 1	263.8	0.16172	105.2228	P13:345:UMZB:# 244 #: BD IN SD. LOSS OF TX	
25SP	16ALL	2	TO->FROM	G16_035	GLENHAM - L3 HAWDON 230KV CKT 1	263.8	0.16172	105.526	ANTELOP-LNX3345.00 - ANTELOPE VALLEY 345KV CKT Z	
25SP	16ALL	2	TO->FROM	G16_035	GLENHAM - L3 HAWDON 230KV CKT 1	263.8	0.16172	105.2228	ANTELOP-LNX3345.00 - BRDLAND-LNX3345.00 345KV CKT 1	
25SP	16ALL	2	TO->FROM	G16_035	GLENHAM - L3 HAWDON 230KV CKT 1	263.8	0.16172	105.2228	BRDLAND-LNX3345.00 - HURON 345KV CKT Z	
25SP	16ALL	2	TO->FROM	G16_035	GLENHAM - L3 HAWDON 230KV CKT 1	263.8	0.16172	105.2228	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	
25SP	16ALL	2	TO->FROM	G16_035	GLENHAM - L3 HAWDON 230KV CKT 1	263.8	0.16172	105.1849	BROADLAND - HURON 230KV CKT 1	
20SP	16ALL	2	TO->FROM	G16_035	GLENHAM - L3 HAWDON 230KV CKT 1	264	0.16162	101.2868	P12:345:UMZB:# 102 #: AVS BD IN ND. AVS BRD LR	
20SP	16ALL	2	TO->FROM	G16_035	GLENHAM - L3 HAWDON 230KV CKT 1	264	0.16162	101.2868	P12:345:UMZB:# 103 #: BD IN SD. LOSS OF LINE	
20SP	16ALL	2	TO->FROM	G16_035	GLENHAM - L3 HAWDON 230KV CKT 1	264	0.16162	101.0595	P13:345:UMZB:# 244 #: BD IN SD. LOSS OF TX	
20SP	16ALL	2	TO->FROM	G16_035	GLENHAM - L3 HAWDON 230KV CKT 1	264	0.16162	101.3625	ANTELOP-LNX3345.00 - ANTELOPE VALLEY 345KV CKT Z	
20SP	16ALL	2	TO->FROM	G16_035	GLENHAM - L3 HAWDON 230KV CKT 1	264	0.16162	101.0974	BRDLAND-LNX3345.00 - HURON 345KV CKT Z	
20SP	16ALL	2	TO->FROM	G16_035	GLENHAM - L3 HAWDON 230KV CKT 1	264	0.16162	101.0974	ANTELOP-LNX3345.00 - BRDLAND-LNX3345.00 345KV CKT 1	
20SP	16ALL	2	TO->FROM	G16_035	GLENHAM - L3 HAWDON 230KV CKT 1	264	0.16162	101.0595	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	
20SP	16ALL	2	TO->FROM	G16_035	GLENHAM - L3 HAWDON 230KV CKT 1	264	0.16162	101.0595	BROADLAND - HURON 230KV CKT 1	
17G	16ALL	2	TO->FROM	G16_035	GLENHAM - L3 HAWDON 230KV CKT 1	264	0.16119	107.1707	G16-044-TAP 345.00 - GROTON-LNX3 345.00 345KV CKT 1	
17G	16ALL	2	TO->FROM	G16_035	GLENHAM - L3 HAWDON 230KV CKT 1	264	0.16119	107.1707	GROTON - GROTON-LNX3 345.00 345KV CKT Z	
25SP	16ALL	2	TO->FROM	G16_035	GLENHAM - L3 HAWDON 230KV CKT 1	263.8	0.16085	103.1494	BISON - HETINGER 230KV CKT 1	
25SP	16ALL	2	TO->FROM	G16_035	GLENHAM - L3 HAWDON 230KV CKT 1	263.8	0.16085	101.3677	BISON - MAURINE 230KV CKT 1	
20L	16ALL	2	TO->FROM	G16_035	GLENHAM - L3 HAWDON 230KV CKT 1	263.6	0.1606	101.5873	P12:345:UMZB:# 102 #: AVS BD IN ND. AVS BRD LR	
20L	16ALL	2	TO->FROM	G16_035	GLENHAM - L3 HAWDON 230KV CKT 1	263.6	0.1606	101.5873	P12:345:UMZB:# 103 #: BD IN SD. LOSS OF LINE	
20L	16ALL	2	TO->FROM	G16_035	GLENHAM - L3 HAWDON 230KV CKT 1	263.6	0.1606	101.4735	P13:345:UMZB:# 244 #: BD IN SD. LOSS OF TX	
20L	16ALL	2	TO->FROM	G16_035	GLENHAM - L3 HAWDON 230KV CKT 1	263.6	0.1606	101.6632	ANTELOP-LNX3345.00 - ANTELOPE VALLEY 345KV CKT Z	
20L	16ALL	2	TO->FROM	G16_035	GLENHAM - L3 HAWDON 230KV CKT 1	263.6	0.1606	101.4735	ANTELOP-LNX3345.00 - BRDLAND-LNX3345.00 345KV CKT 1	
20L	16ALL	2	TO->FROM	G16_035	GLENHAM - L3 HAWDON 230KV CKT 1	263.6	0.1606	101.4735	BRDLAND-LNX3345.00 - HURON 345KV CKT Z	
20L	16ALL	2	TO->FROM	G16_035	GLENHAM - L3 HAWDON 230KV CKT 1	263.6	0.1606	101.4735	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	
20L	16ALL	2	TO->FROM	G16_035	GLENHAM - L3 HAWDON 230KV CKT 1	263.6	0.1606	101.4356	BROADLAND - HURON 230KV CKT 1	
20L	16ALL	2	TO->FROM	G16_035	GLENHAM - L3 HAWDON 230KV CKT 1	263.6	0.16013	102.3416	BISON - HETINGER 230KV CKT 1	
20L	16ALL	2	TO->FROM	G16_035	GLENHAM - L3 HAWDON 230KV CKT 1	263.6	0.16013	101.0518	BISON - MAURINE 230KV CKT 1	
25SP	16ALL	2	TO->FROM	G16_035	GLENHAM - L3 HAWDON 230KV CKT 1	263.8	0.1599	104.3735	G16-044-TAP 345.00 - GROTON-LNX3 345.00 345KV CKT 1	

SEASON	GROUP	SCENARIO	DIRECTION	SOURCE	MONITORED ELEMENT	RATE		CONTINGENCY		CONTINGENCY
						(MVA)	TDF	LOADING %		
25SP	16ALL	2	TO->FROM	G16_035	GLENHAM - L3 HAWDON 230KV CKT 1	263.8	0.1599	104.3735		GROTON - GROTON-LNX3 345.00 345KV CKT Z
20SP	16ALL	2	TO->FROM	G16_035	GLENHAM - L3 HAWDON 230KV CKT 1	264	0.15981	100.2901		G16-044-TAP 345.00 - GROTON-LNX3 345.00 345KV CKT 1
20SP	16ALL	2	TO->FROM	G16_035	GLENHAM - L3 HAWDON 230KV CKT 1	264	0.15981	100.2901		GROTON - GROTON-LNX3 345.00 345KV CKT Z
17SP	16ALL	2	TO->FROM	G16_035	GLENHAM - L3 HAWDON 230KV CKT 1	263.8	0.15967	114.1883		RIEL - ROSEAU 500KV CKT 1
17SP	16ALL	2	TO->FROM	G16_035	GLENHAM - L3 HAWDON 230KV CKT 1	263.8	0.15967	113.6956		ROSEAU - ROSEAU 2 500.00 500KV CKT 1
17SP	16ALL	2	TO->FROM	G16_035	GLENHAM - L3 HAWDON 230KV CKT 1	263.8	0.15967	113.6956		ROSEAU - ROSEAU 2 500.00 500KV CKT 1
17SP	16ALL	2	TO->FROM	G16_035	GLENHAM - L3 HAWDON 230KV CKT 1	263.8	0.15967	113.2028		FORBES - ROSEAU 500KV CKT 1
20L	16ALL	2	TO->FROM	G16_035	GLENHAM - L3 HAWDON 230KV CKT 1	263.6	0.15895	100.9124		GROTON - GROTON-LNX3 345.00 345KV CKT Z
20L	16ALL	2	TO->FROM	G16_035	GLENHAM - L3 HAWDON 230KV CKT 1	263.6	0.15895	100.9124		G16-044-TAP 345.00 - GROTON-LNX3 345.00 345KV CKT 1
17G	16ALL	2	TO->FROM	G16_035	GLENHAM - L3 HAWDON 230KV CKT 1	264	0.15856	108.691		RIEL - ROSEAU 500KV CKT 1
17G	16ALL	2	TO->FROM	G16_035	GLENHAM - L3 HAWDON 230KV CKT 1	264	0.15856	108.388		ROSEAU - ROSEAU 2 500.00 500KV CKT 1
17G	16ALL	2	TO->FROM	G16_035	GLENHAM - L3 HAWDON 230KV CKT 1	264	0.15856	108.388		ROSEAU - ROSEAU 2 500.00 500KV CKT 1
17G	16ALL	2	TO->FROM	G16_035	GLENHAM - L3 HAWDON 230KV CKT 1	264	0.15856	108.0471		FORBES - ROSEAU 500KV CKT 1
25SP	16ALL	2	TO->FROM	G16_035	GLENHAM - L3 HAWDON 230KV CKT 1	263.8	0.15726	108.4358		RIEL - ROSEAU 500KV CKT 1
25SP	16ALL	2	TO->FROM	G16_035	GLENHAM - L3 HAWDON 230KV CKT 1	263.8	0.15726	108.0188		ROSEAU - ROSEAU 2 500.00 500KV CKT 1
25SP	16ALL	2	TO->FROM	G16_035	GLENHAM - L3 HAWDON 230KV CKT 1	263.8	0.15726	108.0188		ROSEAU - ROSEAU 2 500.00 500KV CKT 1
25SP	16ALL	2	TO->FROM	G16_035	GLENHAM - L3 HAWDON 230KV CKT 1	263.8	0.15726	107.6018		FORBES - ROSEAU 500KV CKT 1
20SP	16ALL	2	TO->FROM	G16_035	GLENHAM - L3 HAWDON 230KV CKT 1	264	0.1572	105.3409		RIEL - ROSEAU 500KV CKT 1
20SP	16ALL	2	TO->FROM	G16_035	GLENHAM - L3 HAWDON 230KV CKT 1	264	0.1572	104.8864		ROSEAU - ROSEAU 2 500.00 500KV CKT 1
20SP	16ALL	2	TO->FROM	G16_035	GLENHAM - L3 HAWDON 230KV CKT 1	264	0.1572	104.8864		ROSEAU - ROSEAU 2 500.00 500KV CKT 1
20SP	16ALL	2	TO->FROM	G16_035	GLENHAM - L3 HAWDON 230KV CKT 1	264	0.1572	104.4318		FORBES - ROSEAU 500KV CKT 1
20L	16ALL	2	TO->FROM	G16_035	GLENHAM - L3 HAWDON 230KV CKT 1	263.6	0.1566	101.962		RIEL - ROSEAU 500KV CKT 1
20L	16ALL	2	TO->FROM	G16_035	GLENHAM - L3 HAWDON 230KV CKT 1	263.6	0.1566	101.7723		ROSEAU - ROSEAU 2 500.00 500KV CKT 1
20L	16ALL	2	TO->FROM	G16_035	GLENHAM - L3 HAWDON 230KV CKT 1	263.6	0.1566	101.7723		ROSEAU - ROSEAU 2 500.00 500KV CKT 1
20L	16ALL	2	TO->FROM	G16_035	GLENHAM - L3 HAWDON 230KV CKT 1	263.6	0.1566	101.5827		FORBES - ROSEAU 500KV CKT 1
17SP	16ALL	2	FROM->TO	G16_035	GLENHAM - WHITLOK 230KV CKT 1	259.4	0.18292	109.9921		G16-017-TAP 345.00 - G16035-TAPII345.00 345KV CKT 1
17SP	16ALL	2	FROM->TO	G16_035	GLENHAM - WHITLOK 230KV CKT 1	259.4	0.18292	109.8765		FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1
17SP	16ALL	2	FROM->TO	G16_035	GLENHAM - WHITLOK 230KV CKT 1	259.4	0.18292	109.8765		FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z
17G	16ALL	2	FROM->TO	G16_035	GLENHAM - WHITLOK 230KV CKT 1	258.9	0.18123	111.0881		G16-017-TAP 345.00 - G16035-TAPII345.00 345KV CKT 1
17G	16ALL	2	FROM->TO	G16_035	GLENHAM - WHITLOK 230KV CKT 1	258.9	0.18123	110.9722		FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z
17G	16ALL	2	FROM->TO	G16_035	GLENHAM - WHITLOK 230KV CKT 1	258.9	0.18123	110.9722		FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1
25SP	16ALL	2	FROM->TO	G16_035	GLENHAM - WHITLOK 230KV CKT 1	259.4	0.17992	102.592		G16-017-TAP 345.00 - G16035-TAPII345.00 345KV CKT 1
25SP	16ALL	2	FROM->TO	G16_035	GLENHAM - WHITLOK 230KV CKT 1	259.4	0.17992	102.4764		FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1
25SP	16ALL	2	FROM->TO	G16_035	GLENHAM - WHITLOK 230KV CKT 1	259.4	0.17992	102.4764		FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z
20L	16ALL	2	FROM->TO	G16_035	GLENHAM - WHITLOK 230KV CKT 1	258.5	0.17789	106.273		G16-017-TAP 345.00 - G16035-TAPII345.00 345KV CKT 1
20L	16ALL	2	FROM->TO	G16_035	GLENHAM - WHITLOK 230KV CKT 1	258.5	0.17789	106.1957		FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z
20L	16ALL	2	FROM->TO	G16_035	GLENHAM - WHITLOK 230KV CKT 1	258.5	0.17789	106.1957		FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1
17SP	16ALL	2	FROM->TO	G16_035	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	703.1	0.13209	102.3293		RIEL - ROSEAU 500KV CKT 1
17SP	16ALL	2	FROM->TO	G16_035	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	703.1	0.13209	102.1302		ROSEAU - ROSEAU 2 500.00 500KV CKT 1
17SP	16ALL	2	FROM->TO	G16_035	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	703.1	0.13209	102.1302		ROSEAU - ROSEAU 2 500.00 500KV CKT 1
17SP	16ALL	2	FROM->TO	G16_035	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	703.1	0.13209	101.9168		FORBES - ROSEAU 500KV CKT 1
17SP	16ALL	0	FROM->TO	G16_035	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	703.2	0.12395	102.1298		RIEL - ROSEAU 500KV CKT 1
17SP	16ALL	0	FROM->TO	G16_035	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	703.2	0.12395	101.9307		ROSEAU - ROSEAU 2 500.00 500KV CKT 1
17SP	16ALL	0	FROM->TO	G16_035	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	703.2	0.12395	101.9307		ROSEAU - ROSEAU 2 500.00 500KV CKT 1
17SP	16ALL	0	FROM->TO	G16_035	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	703.2	0.12395	101.7316		FORBES - ROSEAU 500KV CKT 1
17SP	16ALL	2	TO->FROM	G16_035	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	712.1	0.13209	101.036		RIEL - ROSEAU 500KV CKT 1
17SP	16ALL	2	TO->FROM	G16_035	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	712.1	0.13209	100.8394		ROSEAU - ROSEAU 2 500.00 500KV CKT 1
17SP	16ALL	2	TO->FROM	G16_035	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	712.1	0.13209	100.8394		ROSEAU - ROSEAU 2 500.00 500KV CKT 1
17SP	16ALL	2	TO->FROM	G16_035	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	712.1	0.13209	100.6287		FORBES - ROSEAU 500KV CKT 1
17SP	16ALL	0	TO->FROM	G16_035	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	712.2	0.12395	100.8392		RIEL - ROSEAU 500KV CKT 1
17SP	16ALL	0	TO->FROM	G16_035	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	712.2	0.12395	100.6426		ROSEAU - ROSEAU 2 500.00 500KV CKT 1
17SP	16ALL	0	TO->FROM	G16_035	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	712.2	0.12395	100.6426		ROSEAU - ROSEAU 2 500.00 500KV CKT 1
17SP	16ALL	0	TO->FROM	G16_035	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	712.2	0.12395	100.446		FORBES - ROSEAU 500KV CKT 1
16WP	03ALL	0	TO->FROM	G16_010B	GRAND ISLAND - SWEETWATER 345KV CKT 1	715.7	0.04454	104.4962		AXTELL - PAULINE 345KV CKT 1
16WP	03ALL	2	TO->FROM	G16_010B	GRAND ISLAND - SWEETWATER 345KV CKT 1	715.7	0.04402	104.424		AXTELL - PAULINE 345KV CKT 1

SEASON	GROUP	SCENARIO	DIRECTION	SOURCE	MONITORED ELEMENT	RATE		CONTINGENCY		CONTINGENCY
						(MVA)	TDF	LOADING %		
16WP	03ALL		3 TO->FROM	G16_010B	GRAND ISLAND - SWEETWATER 345KV CKT 1	715.7	0.04249	104.2881	AXTELL - PAULINE 345KV CKT 1	
16WP	03ALL		4 TO->FROM	G16_010B	GRAND ISLAND - SWEETWATER 345KV CKT 1	715.7	0.04076	104.1594	AXTELL - PAULINE 345KV CKT 1	
17SP	16ALL		0 FROM->TO	G16_035	GRANITE FALLS - MN VALLEY TAP 230KV CKT 1	256.5	0.06065	147.5138	GRANITE FALLS - MN VALLEY TAP 230KV CKT 1	
17G	16ALL		0 FROM->TO	G16_035	GRANITE FALLS - MN VALLEY TAP 230KV CKT 1	257	0.06031	132.8248	GRANITE FALLS - MN VALLEY TAP 230KV CKT 1	
17SP	16ALL		2 FROM->TO	G16_035	GRANITE FALLS - MN VALLEY TAP 230KV CKT 1	256.6	0.0594	147.3976	GRANITE FALLS - MN VALLEY TAP 230KV CKT 1	
17G	16ALL		2 FROM->TO	G16_035	GRANITE FALLS - MN VALLEY TAP 230KV CKT 1	257	0.05906	132.6849	GRANITE FALLS - MN VALLEY TAP 230KV CKT 1	
16WP	16ALL		0 FROM->TO	G16_035	GRANITE FALLS - MN VALLEY TAP 230KV CKT 1	258.1	0.05889	116.5784	GRANITE FALLS - MN VALLEY TAP 230KV CKT 1	
16WP	16ALL		2 FROM->TO	G16_035	GRANITE FALLS - MN VALLEY TAP 230KV CKT 1	258.1	0.05766	116.5553	GRANITE FALLS - MN VALLEY TAP 230KV CKT 1	
25SP	16ALL		0 FROM->TO	G16_035	GRANITE FALLS - MN VALLEY TAP 230KV CKT 1	257.5	0.05224	120.1293	GRANITE FALLS - MN VALLEY TAP 230KV CKT 1	
20SP	16ALL		0 FROM->TO	G16_035	GRANITE FALLS - MN VALLEY TAP 230KV CKT 1	258.2	0.05196	120.4846	GRANITE FALLS - MN VALLEY TAP 230KV CKT 1	
17SP	16ALL		0 FROM->TO	G16_035	GRANITE FALLS - MN VALLEY TAP 230KV CKT 1	256.5	0.05179	117.9144	P12:230:UMZW:# 1786 #: GF IN MN. GF-MNVLTAP LINE FAULT	
25SP	16ALL		2 FROM->TO	G16_035	GRANITE FALLS - MN VALLEY TAP 230KV CKT 1	257.5	0.05162	120.1583	GRANITE FALLS - MN VALLEY TAP 230KV CKT 1	
20SP	16ALL		2 FROM->TO	G16_035	GRANITE FALLS - MN VALLEY TAP 230KV CKT 1	258.2	0.05135	120.4748	GRANITE FALLS - MN VALLEY TAP 230KV CKT 1	
17G	16ALL		0 FROM->TO	G16_035	GRANITE FALLS - MN VALLEY TAP 230KV CKT 1	257	0.05128	103.8853	P12:230:UMZW:# 1786 #: GF IN MN. GF-MNVLTAP LINE FAULT	
17SP	16ALL		2 FROM->TO	G16_035	GRANITE FALLS - MN VALLEY TAP 230KV CKT 1	256.6	0.0503	117.8278	P12:230:UMZW:# 1786 #: GF IN MN. GF-MNVLTAP LINE FAULT	
17G	16ALL		2 FROM->TO	G16_035	GRANITE FALLS - MN VALLEY TAP 230KV CKT 1	257	0.0498	103.7703	P12:230:UMZW:# 1786 #: GF IN MN. GF-MNVLTAP LINE FAULT	
20L	16ALL		0 FROM->TO	G16_035	GRANITE FALLS - MN VALLEY TAP 230KV CKT 1	257.7	0.04795	112.997	GRANITE FALLS - MN VALLEY TAP 230KV CKT 1	
20L	16ALL		2 FROM->TO	G16_035	GRANITE FALLS - MN VALLEY TAP 230KV CKT 1	257.7	0.04733	112.9131	GRANITE FALLS - MN VALLEY TAP 230KV CKT 1	
17SP	16ALL		0 FROM->TO	G16_035	GRANITE FALLS - MN VALLEY TAP 230KV CKT 1	256.5	0.04727	115.0661	P12:345:UMZW:# 1747 #: WT2 IN SD. WT2-WHT LINE FAULT	
17SP	16ALL		0 FROM->TO	G16_035	GRANITE FALLS - MN VALLEY TAP 230KV CKT 1	256.5	0.04727	115.0661	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	
17SP	16ALL		0 FROM->TO	G16_035	GRANITE FALLS - MN VALLEY TAP 230KV CKT 1	256.5	0.04727	115.0661	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	
17SP	16ALL		2 FROM->TO	G16_035	GRANITE FALLS - MN VALLEY TAP 230KV CKT 1	256.6	0.04717	115.0143	P12:345:UMZW:# 1747 #: WT2 IN SD. WT2-WHT LINE FAULT	
17SP	16ALL		2 FROM->TO	G16_035	GRANITE FALLS - MN VALLEY TAP 230KV CKT 1	256.6	0.04717	115.0143	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	
17SP	16ALL		2 FROM->TO	G16_035	GRANITE FALLS - MN VALLEY TAP 230KV CKT 1	256.6	0.04717	115.0143	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	
17G	16ALL		0 FROM->TO	G16_035	GRANITE FALLS - MN VALLEY TAP 230KV CKT 1	257	0.04674	103.02	P12:345:UMZW:# 1747 #: WT2 IN SD. WT2-WHT LINE FAULT	
17G	16ALL		0 FROM->TO	G16_035	GRANITE FALLS - MN VALLEY TAP 230KV CKT 1	257	0.04674	103.02	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	
17G	16ALL		0 FROM->TO	G16_035	GRANITE FALLS - MN VALLEY TAP 230KV CKT 1	257	0.04674	103.02	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	
17G	16ALL		2 FROM->TO	G16_035	GRANITE FALLS - MN VALLEY TAP 230KV CKT 1	257	0.04663	102.9706	P12:345:UMZW:# 1747 #: WT2 IN SD. WT2-WHT LINE FAULT	
17G	16ALL		2 FROM->TO	G16_035	GRANITE FALLS - MN VALLEY TAP 230KV CKT 1	257	0.04663	102.9706	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	
17G	16ALL		2 FROM->TO	G16_035	GRANITE FALLS - MN VALLEY TAP 230KV CKT 1	257	0.04663	102.9706	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	
20SP	17ALL		0 TO->FROM	G16_006	HARMONY - ST FRANCIS 115KV CKT 1	75.9	0.03849	134.9611	P12:115:UMZW:# 173 #: WI-WE-MS IN SD. WITTEN IS A TAP	
20SP	17ALL		0 TO->FROM	G16_006	HARMONY - ST FRANCIS 115KV CKT 1	75.9	0.03834	134.1751	MISSION - WITTEN 115KV CKT 1	
20WP	17ALL		0 TO->FROM	G16_006	HARMONY - ST FRANCIS 115KV CKT 1	77.9	0.03815	110.0366	P12:115:UMZW:# 173 #: WI-WE-MS IN SD. WITTEN IS A TAP	
25SP	17ALL		0 TO->FROM	G16_006	HARMONY - ST FRANCIS 115KV CKT 1	76.2	0.03815	135.4389	P12:115:UMZW:# 173 #: WI-WE-MS IN SD. WITTEN IS A TAP	
20WP	17ALL		0 TO->FROM	G16_006	HARMONY - ST FRANCIS 115KV CKT 1	77.9	0.038	109.3991	MISSION - WITTEN 115KV CKT 1	
25SP	17ALL		0 TO->FROM	G16_006	HARMONY - ST FRANCIS 115KV CKT 1	76.2	0.038	134.6561	MISSION - WITTEN 115KV CKT 1	
17G	17ALL		0 TO->FROM	G16_006	HARMONY - ST FRANCIS 115KV CKT 1	78	0.03682	106.8992	P12:115:UMZW:# 173 #: WI-WE-MS IN SD. WITTEN IS A TAP	
17G	17ALL		0 TO->FROM	G16_006	HARMONY - ST FRANCIS 115KV CKT 1	78	0.03682	105.2325	P12:115:UMZW:# 172 #: WI IN SD.	
17G	17ALL		0 TO->FROM	G16_006	HARMONY - ST FRANCIS 115KV CKT 1	78	0.03682	106.8992	MISSION - WITTEN 115KV CKT 1	
17G	17ALL		0 TO->FROM	G16_006	HARMONY - ST FRANCIS 115KV CKT 1	78	0.03682	105.3607	WINNER - WITTEN 115KV CKT 1	
16WP	17ALL		0 TO->FROM	G16_006	HARMONY - ST FRANCIS 115KV CKT 1	77.4	0.03664	113.3326	P12:115:UMZW:# 173 #: WI-WE-MS IN SD. WITTEN IS A TAP	
16WP	17ALL		0 TO->FROM	G16_006	HARMONY - ST FRANCIS 115KV CKT 1	77.4	0.03664	111.3946	P12:115:UMZW:# 172 #: WI IN SD.	
16WP	17ALL		0 TO->FROM	G16_006	HARMONY - ST FRANCIS 115KV CKT 1	77.4	0.03664	113.3326	MISSION - WITTEN 115KV CKT 1	
16WP	17ALL		0 TO->FROM	G16_006	HARMONY - ST FRANCIS 115KV CKT 1	77.4	0.03664	111.5238	WINNER - WITTEN 115KV CKT 1	
16WP	17ALL		0 TO->FROM	G16_006	HARMONY - ST FRANCIS 115KV CKT 1	77.4	0.03664	103.5135	GREGORY - WINNER 115KV CKT 1	
17SP	17ALL		0 TO->FROM	G16_006	HARMONY - ST FRANCIS 115KV CKT 1	75.4	0.0365	146.4631	P12:115:UMZW:# 173 #: WI-WE-MS IN SD. WITTEN IS A TAP	
17SP	17ALL		0 TO->FROM	G16_006	HARMONY - ST FRANCIS 115KV CKT 1	75.4	0.0365	144.8716	P12:115:UMZW:# 172 #: WI IN SD.	
17SP	17ALL		0 TO->FROM	G16_006	HARMONY - ST FRANCIS 115KV CKT 1	75.4	0.0365	132.1395	P12:115:UMZW:# 150 #: GY-BO-FR IN SD. GY-BO-FR BONESTEEL HAS FAULT INTERRUPTING DEVICES (NOT BREAKERS)	
17SP	17ALL		0 TO->FROM	G16_006	HARMONY - ST FRANCIS 115KV CKT 1	75.4	0.0365	146.4631	MISSION - WITTEN 115KV CKT 1	
17SP	17ALL		0 TO->FROM	G16_006	HARMONY - ST FRANCIS 115KV CKT 1	75.4	0.0365	145.0042	WINNER - WITTEN 115KV CKT 1	
17SP	17ALL		0 TO->FROM	G16_006	HARMONY - ST FRANCIS 115KV CKT 1	75.4	0.0365	138.5056	GREGORY - WINNER 115KV CKT 1	
17SP	17ALL		0 TO->FROM	G16_006	HARMONY - ST FRANCIS 115KV CKT 1	75.4	0.0365	132.1395	BONESTEEL - GREGORY 115KV CKT 1	
17SP	17ALL		0 TO->FROM	G16_006	HARMONY - ST FRANCIS 115KV CKT 1	75.4	0.0365	131.0785	BONESTEEL - FT RANDAL 115KV CKT 1	
25SP	17ALL		0 TO->FROM	G16_006	HARMONY - ST FRANCIS 115KV CKT 1	76.2	0.03006	111.2862	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	
25SP	17ALL		0 TO->FROM	G16_006	HARMONY - ST FRANCIS 115KV CKT 1	76.2	0.03006	111.155	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	

SEASON	GROUP	SCENARIO	DIRECTION	SOURCE	MONITORED ELEMENT	RATE		CONTINGENCY		CONTINGENCY
						(MVA)	TDF	LOADING %		
25SP	17ALL	0	TO->FROM	G16_006	HARMONY - ST FRANCIS 115KV CKT 1	76.2	0.03006	107.6117	FT THOMPSON - FTTHOM2-LNX3345.00 345KV CKT Z	
20SP	17ALL	0	TO->FROM	G16_006	HARMONY - ST FRANCIS 115KV CKT 1	75.9	0.03005	108.9185	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	
20SP	17ALL	0	TO->FROM	G16_006	HARMONY - ST FRANCIS 115KV CKT 1	75.9	0.03005	108.7867	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	
20SP	17ALL	0	TO->FROM	G16_006	HARMONY - ST FRANCIS 115KV CKT 1	75.9	0.03005	105.3612	FT THOMPSON - FTTHOM2-LNX3345.00 345KV CKT Z	
20SP	17ALL	0	FROM->TO	G16_006	HARMONY - VALENTINE 115KV CKT 1	75.1	0.03849	126.412	P12:115:UMZW:# 173 #: WI-WE-MS IN SD. WITTEN IS A TAP	
20SP	17ALL	0	FROM->TO	G16_006	HARMONY - VALENTINE 115KV CKT 1	75.1	0.03834	125.6177	MISSION - WITTEN 115KV CKT 1	
20WP	17ALL	0	FROM->TO	G16_006	HARMONY - VALENTINE 115KV CKT 1	77.6	0.03815	105.6939	P12:115:UMZW:# 173 #: WI-WE-MS IN SD. WITTEN IS A TAP	
25SP	17ALL	0	FROM->TO	G16_006	HARMONY - VALENTINE 115KV CKT 1	75.4	0.03815	126.3985	P12:115:UMZW:# 173 #: WI-WE-MS IN SD. WITTEN IS A TAP	
20WP	17ALL	0	FROM->TO	G16_006	HARMONY - VALENTINE 115KV CKT 1	77.6	0.038	104.9252	MISSION - WITTEN 115KV CKT 1	
25SP	17ALL	0	FROM->TO	G16_006	HARMONY - VALENTINE 115KV CKT 1	75.4	0.038	125.6073	MISSION - WITTEN 115KV CKT 1	
17G	17ALL	0	FROM->TO	G16_006	HARMONY - VALENTINE 115KV CKT 1	77.7	0.03682	103.0648	P12:115:UMZW:# 173 #: WI-WE-MS IN SD. WITTEN IS A TAP	
17G	17ALL	0	FROM->TO	G16_006	HARMONY - VALENTINE 115KV CKT 1	77.7	0.03682	101.5204	P12:115:UMZW:# 172 #: WI IN SD.	
17G	17ALL	0	FROM->TO	G16_006	HARMONY - VALENTINE 115KV CKT 1	77.7	0.03682	103.0648	MISSION - WITTEN 115KV CKT 1	
17G	17ALL	0	FROM->TO	G16_006	HARMONY - VALENTINE 115KV CKT 1	77.7	0.03682	101.6491	WINNER - WITTEN 115KV CKT 1	
16WP	17ALL	0	FROM->TO	G16_006	HARMONY - VALENTINE 115KV CKT 1	77.1	0.03664	109.1043	P12:115:UMZW:# 173 #: WI-WE-MS IN SD. WITTEN IS A TAP	
16WP	17ALL	0	FROM->TO	G16_006	HARMONY - VALENTINE 115KV CKT 1	77.1	0.03664	107.1588	P12:115:UMZW:# 172 #: WI IN SD.	
16WP	17ALL	0	FROM->TO	G16_006	HARMONY - VALENTINE 115KV CKT 1	77.1	0.03664	109.1043	MISSION - WITTEN 115KV CKT 1	
16WP	17ALL	0	FROM->TO	G16_006	HARMONY - VALENTINE 115KV CKT 1	77.1	0.03664	107.2885	WINNER - WITTEN 115KV CKT 1	
17SP	17ALL	0	FROM->TO	G16_006	HARMONY - VALENTINE 115KV CKT 1	74.6	0.0365	138.3823	P12:115:UMZW:# 173 #: WI-WE-MS IN SD. WITTEN IS A TAP	
17SP	17ALL	0	FROM->TO	G16_006	HARMONY - VALENTINE 115KV CKT 1	74.6	0.0365	136.7737	P12:115:UMZW:# 172 #: WI IN SD.	
17SP	17ALL	0	FROM->TO	G16_006	HARMONY - VALENTINE 115KV CKT 1	74.6	0.0365	123.9051	P12:115:UMZW:# 150 #: GY-BO-FR IN SD. GY-BO-FR BONESTEEL HAS FAULT INTERRUPTING DEVICES (NOT BREAKERS)	
17SP	17ALL	0	FROM->TO	G16_006	HARMONY - VALENTINE 115KV CKT 1	74.6	0.0365	138.3823	MISSION - WITTEN 115KV CKT 1	
17SP	17ALL	0	FROM->TO	G16_006	HARMONY - VALENTINE 115KV CKT 1	74.6	0.0365	136.9078	WINNER - WITTEN 115KV CKT 1	
17SP	17ALL	0	FROM->TO	G16_006	HARMONY - VALENTINE 115KV CKT 1	74.6	0.0365	130.3394	GREGORY - WINNER 115KV CKT 1	
17SP	17ALL	0	FROM->TO	G16_006	HARMONY - VALENTINE 115KV CKT 1	74.6	0.0365	123.9051	BONESTEEL - GREGORY 115KV CKT 1	
17SP	17ALL	0	FROM->TO	G16_006	HARMONY - VALENTINE 115KV CKT 1	74.6	0.0365	122.8327	BONESTEEL - FT RANDAL 115KV CKT 1	
25SP	17ALL	0	FROM->TO	G16_006	HARMONY - VALENTINE 115KV CKT 1	75.4	0.03006	101.8569	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	
25SP	17ALL	0	FROM->TO	G16_006	HARMONY - VALENTINE 115KV CKT 1	75.4	0.03006	101.8569	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	
20SP	17ALL	0	FROM->TO	G16_006	HARMONY - VALENTINE 115KV CKT 1	75.1	0.03005	100.092	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	
20SP	17ALL	0	FROM->TO	G16_006	HARMONY - VALENTINE 115KV CKT 1	75.1	0.03005	100.092	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	
25SP	03ALL	0	FROM->TO	G16_010B	HARPER - MILAN TAP 138KV CKT 1	133.8	0.33191	100.8905	DBL-G1151-TGA	
20SP	03ALL	0	FROM->TO	G16_010B	HARPER - MILAN TAP 138KV CKT 1	131.2	0.33161	117.3777	DBL-G1151-TGA	
20WP	03ALL	0	FROM->TO	G16_010B	HARPER - MILAN TAP 138KV CKT 1	140.6	0.33094	122.516	DBL-G1151-TGA	
20L	03ALL	0	FROM->TO	G16_010B	HARPER - MILAN TAP 138KV CKT 1	141.1	0.32976	114.2518	DBL-G1151-TGA	
17G	03ALL	4	FROM->TO	G16_010B	HARPER - MILAN TAP 138KV CKT 1	312.6	0.52156	164.207	DBL-G1524-WICH	
16WP	03ALL	4	FROM->TO	G16_010B	HARPER - MILAN TAP 138KV CKT 1	313.1	0.52142	160.0367	DBL-G1524-WICH	
17G	03ALL	3	FROM->TO	G16_010B	HARPER - MILAN TAP 138KV CKT 1	312.4	0.46947	148.069	DBL-G1524-WICH	
16WP	03ALL	3	FROM->TO	G16_010B	HARPER - MILAN TAP 138KV CKT 1	312.9	0.46934	144.3084	DBL-G1524-WICH	
17SP	03ALL	4	FROM->TO	G16_010B	HARPER - MILAN TAP 138KV CKT 1	312.7	0.45268	133.2962	DBL-G1524-WICH	
20SP	03ALL	4	FROM->TO	G16_010B	HARPER - MILAN TAP 138KV CKT 1	311.4	0.44987	121.2624	DBL-G1524-WICH	
20WP	03ALL	4	FROM->TO	G16_010B	HARPER - MILAN TAP 138KV CKT 1	313.1	0.44863	128.5897	DBL-G1524-WICH	
20L	03ALL	4	FROM->TO	G16_010B	HARPER - MILAN TAP 138KV CKT 1	313.3	0.44504	120.8782	DBL-G1524-WICH	
17G	03ALL	2	FROM->TO	G16_010B	HARPER - MILAN TAP 138KV CKT 1	139.2	0.42231	296.9328	DBL-G1524-WICH	
16WP	03ALL	2	FROM->TO	G16_010B	HARPER - MILAN TAP 138KV CKT 1	140.4	0.4222	287.7591	DBL-G1524-WICH	
17SP	03ALL	3	FROM->TO	G16_010B	HARPER - MILAN TAP 138KV CKT 1	312.6	0.40598	119.7336	DBL-G1524-WICH	
20SP	03ALL	3	FROM->TO	G16_010B	HARPER - MILAN TAP 138KV CKT 1	311.6	0.40279	108.5779	DBL-G1524-WICH	
20WP	03ALL	3	FROM->TO	G16_010B	HARPER - MILAN TAP 138KV CKT 1	313	0.40168	115.4468	DBL-G1524-WICH	
20L	03ALL	3	FROM->TO	G16_010B	HARPER - MILAN TAP 138KV CKT 1	313.2	0.39846	108.4021	DBL-G1524-WICH	
17G	03ALL	0	FROM->TO	G16_010B	HARPER - MILAN TAP 138KV CKT 1	140.2	0.39796	292.0534	DBL-G1524-WICH	
16WP	03ALL	0	FROM->TO	G16_010B	HARPER - MILAN TAP 138KV CKT 1	141.4	0.3979	281.6129	DBL-G1524-WICH	
17SP	03ALL	2	FROM->TO	G16_010B	HARPER - MILAN TAP 138KV CKT 1	132.9	0.34788	238.0178	DBL-G1524-WICH	
25SP	03ALL	0	FROM->TO	G16_010B	HARPER - MILAN TAP 138KV CKT 1	133.8	0.34534	184.3818	DBL-G1524-WICH	
20SP	03ALL	0	FROM->TO	G16_010B	HARPER - MILAN TAP 138KV CKT 1	131.2	0.34479	216.8199	DBL-G1524-WICH	
20WP	03ALL	0	FROM->TO	G16_010B	HARPER - MILAN TAP 138KV CKT 1	140.6	0.34384	217.1005	DBL-G1524-WICH	
20L	03ALL	0	FROM->TO	G16_010B	HARPER - MILAN TAP 138KV CKT 1	141.1	0.34108	203.3011	DBL-G1524-WICH	

SEASON	GROUP	SCENARIO	DIRECTION	SOURCE	MONITORED ELEMENT	RATE		CONTINGENCY		CONTINGENCY
						(MVA)	TDF	LOADING %		
17SP	03ALL	0	FROM->TO	G16_010B	HARPER - MILAN TAP 138KV CKT 1	132.9	0.32761	234.9131	DBL-G1524-WICH	
25SP	03ALL	0	FROM->TO	G16_010B	HARPER - MILAN TAP 138KV CKT 1	133.8	0.33191	104.4032	DBL-TGA-MATT	
20SP	03ALL	0	FROM->TO	G16_010B	HARPER - MILAN TAP 138KV CKT 1	131.2	0.33161	120.9601	DBL-TGA-MATT	
20WP	03ALL	0	FROM->TO	G16_010B	HARPER - MILAN TAP 138KV CKT 1	140.6	0.33094	125.7876	DBL-TGA-MATT	
20L	03ALL	0	FROM->TO	G16_010B	HARPER - MILAN TAP 138KV CKT 1	141.1	0.32976	118.8585	DBL-TGA-MATT	
17G	03ALL	4	FROM->TO	G16_010B	HARPER - MILAN TAP 138KV CKT 1	312.6	0.52156	133.8807	DBL-THIS-G1524	
16WP	03ALL	4	FROM->TO	G16_010B	HARPER - MILAN TAP 138KV CKT 1	313.1	0.52142	129.7269	DBL-THIS-G1524	
17G	03ALL	3	FROM->TO	G16_010B	HARPER - MILAN TAP 138KV CKT 1	312.4	0.46947	120.7322	DBL-THIS-G1524	
16WP	03ALL	3	FROM->TO	G16_010B	HARPER - MILAN TAP 138KV CKT 1	312.9	0.46934	117.0154	DBL-THIS-G1524	
17SP	03ALL	4	FROM->TO	G16_010B	HARPER - MILAN TAP 138KV CKT 1	312.7	0.45268	106.8171	DBL-THIS-G1524	
20WP	03ALL	4	FROM->TO	G16_010B	HARPER - MILAN TAP 138KV CKT 1	313.1	0.44863	104.0608	DBL-THIS-G1524	
17G	03ALL	2	FROM->TO	G16_010B	HARPER - MILAN TAP 138KV CKT 1	139.2	0.42231	241.7604	DBL-THIS-G1524	
16WP	03ALL	2	FROM->TO	G16_010B	HARPER - MILAN TAP 138KV CKT 1	140.4	0.4222	232.987	DBL-THIS-G1524	
17G	03ALL	0	FROM->TO	G16_010B	HARPER - MILAN TAP 138KV CKT 1	140.2	0.39796	239.557	DBL-THIS-G1524	
16WP	03ALL	0	FROM->TO	G16_010B	HARPER - MILAN TAP 138KV CKT 1	141.4	0.3979	229.4912	DBL-THIS-G1524	
17SP	03ALL	2	FROM->TO	G16_010B	HARPER - MILAN TAP 138KV CKT 1	132.9	0.34788	190.1623	DBL-THIS-G1524	
25SP	03ALL	0	FROM->TO	G16_010B	HARPER - MILAN TAP 138KV CKT 1	133.8	0.34534	140.0619	DBL-THIS-G1524	
20SP	03ALL	0	FROM->TO	G16_010B	HARPER - MILAN TAP 138KV CKT 1	131.2	0.34479	171.7741	DBL-THIS-G1524	
20WP	03ALL	0	FROM->TO	G16_010B	HARPER - MILAN TAP 138KV CKT 1	140.6	0.34384	175.2797	DBL-THIS-G1524	
20L	03ALL	0	FROM->TO	G16_010B	HARPER - MILAN TAP 138KV CKT 1	141.1	0.34108	161.4868	DBL-THIS-G1524	
17SP	03ALL	0	FROM->TO	G16_010B	HARPER - MILAN TAP 138KV CKT 1	132.9	0.32761	189.2397	DBL-THIS-G1524	
17G	03ALL	2	FROM->TO	G16_010B	HARPER - MILAN TAP 138KV CKT 1	139.2	0.40633	146.6085	DBL-THIS-WWRD	
16WP	03ALL	2	FROM->TO	G16_010B	HARPER - MILAN TAP 138KV CKT 1	140.4	0.40597	141.8227	DBL-THIS-WWRD	
25SP	03ALL	0	FROM->TO	G16_010B	HARPER - MILAN TAP 138KV CKT 1	133.8	0.33686	113.8543	DBL-THIS-WWRD	
20SP	03ALL	0	FROM->TO	G16_010B	HARPER - MILAN TAP 138KV CKT 1	131.2	0.33679	115.3726	DBL-THIS-WWRD	
20WP	03ALL	0	FROM->TO	G16_010B	HARPER - MILAN TAP 138KV CKT 1	140.6	0.33635	115.2495	DBL-THIS-WWRD	
17SP	03ALL	2	FROM->TO	G16_010B	HARPER - MILAN TAP 138KV CKT 1	132.9	0.33584	117.6851	DBL-THIS-WWRD	
20L	03ALL	0	FROM->TO	G16_010B	HARPER - MILAN TAP 138KV CKT 1	141.1	0.33559	110.9151	DBL-THIS-WWRD	
20SP	03ALL	0	FROM->TO	G16_010B	HARPER - MILAN TAP 138KV CKT 1	131.2	0.33161	116.3107	DBL-WWRD-G1151	
20WP	03ALL	0	FROM->TO	G16_010B	HARPER - MILAN TAP 138KV CKT 1	140.6	0.33094	121.5202	DBL-WWRD-G1151	
20L	03ALL	0	FROM->TO	G16_010B	HARPER - MILAN TAP 138KV CKT 1	141.1	0.32976	113.2596	DBL-WWRD-G1151	
17SP	16ALL	0	TO->FROM	G16_035	HAZEL CREEK - MN VALLEY TAP 230KV CKT 1	335.1	0.06912	102.1722	P12:345:UMZW:# 1747 #: WT2 IN SD. WT2-WHT LINE FAULT	
17SP	16ALL	0	TO->FROM	G16_035	HAZEL CREEK - MN VALLEY TAP 230KV CKT 1	335.1	0.06912	102.1722	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	
17SP	16ALL	0	TO->FROM	G16_035	HAZEL CREEK - MN VALLEY TAP 230KV CKT 1	335.1	0.06912	102.1722	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	
17SP	16ALL	2	TO->FROM	G16_035	HAZEL CREEK - MN VALLEY TAP 230KV CKT 1	335.1	0.06807	102.1379	P12:345:UMZW:# 1747 #: WT2 IN SD. WT2-WHT LINE FAULT	
17SP	16ALL	2	TO->FROM	G16_035	HAZEL CREEK - MN VALLEY TAP 230KV CKT 1	335.1	0.06807	102.1379	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	
17SP	16ALL	2	TO->FROM	G16_035	HAZEL CREEK - MN VALLEY TAP 230KV CKT 1	335.1	0.06807	102.1379	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	
17SP	08ALL	0	TO->FROM	G16_010A	HOYT - JEFFREY ENERGY CENTER 345KV CKT 1	1075.3	0.06488	103.6912	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	
17SP	08ALL	0	TO->FROM	G16_010A	HOYT - JEFFREY ENERGY CENTER 345KV CKT 1	1075.3	0.06318	102.7781	SWISSVALE - WEST GARDNER 345KV CKT 1	
17SP	08ALL	0	TO->FROM	G16_033	HOYT - JEFFREY ENERGY CENTER 345KV CKT 1	1075.3	0.03285	103.6912	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	
17SP	08ALL	0	TO->FROM	G16_033	HOYT - JEFFREY ENERGY CENTER 345KV CKT 1	1075.3	0.03036	102.7781	SWISSVALE - WEST GARDNER 345KV CKT 1	
17SP	16ALL	2	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	384.6	0.11028	142.3395	G16-017-TAP 345.00 - G16035-TAPII345.00 345KV CKT 1	
17SP	16ALL	2	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	384.6	0.11028	142.2615	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1	
17SP	16ALL	2	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	384.6	0.11028	142.2615	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z	
17SP	16ALL	2	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	394.9	0.11028	138.8042	G16-017-TAP 345.00 - G16035-TAPII345.00 345KV CKT 1	
17SP	16ALL	2	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	394.9	0.11028	138.7029	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1	
17SP	16ALL	2	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	394.9	0.11028	138.7029	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z	
16WP	16ALL	2	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	392.8	0.10892	121.8252	G16-017-TAP 345.00 - G16035-TAPII345.00 345KV CKT 1	
16WP	16ALL	2	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	392.8	0.10892	121.7743	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1	
16WP	16ALL	2	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	392.8	0.10892	121.7743	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z	
16WP	16ALL	2	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	397.5	0.10892	120.4854	G16-017-TAP 345.00 - G16035-TAPII345.00 345KV CKT 1	
16WP	16ALL	2	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	397.5	0.10892	120.4351	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1	
16WP	16ALL	2	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	397.5	0.10892	120.4351	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z	
25SP	16ALL	2	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	387	0.10733	136.1067	G16-017-TAP 345.00 - G16035-TAPII345.00 345KV CKT 1	
25SP	16ALL	2	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	387	0.10733	136.0292	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1	

SEASON	GROUP	SCENARIO	DIRECTION	SOURCE	MONITORED ELEMENT	RATE		CONTINGENCY		CONTINGENCY
						(MVA)	TDF	LOADING %		
25SP	16ALL		2 FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	387	0.10733	136.0292	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z	
25SP	16ALL		2 FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	395.5	0.10733	133.3332	G16-017-TAP 345.00 - G16035-TAPII345.00 345KV CKT 1	
25SP	16ALL		2 FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	395.5	0.10733	133.2574	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1	
25SP	16ALL		2 FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	395.5	0.10733	133.2574	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z	
17G	16ALL		2 FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	388	0.10712	132.9664	G16-017-TAP 345.00 - G16035-TAPII345.00 345KV CKT 1	
17G	16ALL		2 FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	388	0.10712	132.8891	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1	
17G	16ALL		2 FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	388	0.10712	132.8891	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z	
17G	16ALL		2 FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	395.6	0.10712	130.5383	G16-017-TAP 345.00 - G16035-TAPII345.00 345KV CKT 1	
17G	16ALL		2 FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	395.6	0.10712	130.4625	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z	
17G	16ALL		2 FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	395.6	0.10712	130.4625	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1	
20SP	16ALL		2 FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	388.1	0.10694	133.2863	G16-017-TAP 345.00 - G16035-TAPII345.00 345KV CKT 1	
20SP	16ALL		2 FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	388.1	0.10694	133.2089	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z	
20SP	16ALL		2 FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	388.1	0.10694	133.2089	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1	
20SP	16ALL		2 FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	395.8	0.10694	130.8448	G16-017-TAP 345.00 - G16035-TAPII345.00 345KV CKT 1	
20SP	16ALL		2 FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	395.8	0.10694	130.769	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1	
20SP	16ALL		2 FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	395.8	0.10694	130.769	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z	
20WP	16ALL		2 FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	396.8	0.10458	109.0173	G16-017-TAP 345.00 - G16035-TAPII345.00 345KV CKT 1	
20WP	16ALL		2 FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	396.8	0.10458	108.9669	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1	
20WP	16ALL		2 FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	396.8	0.10458	108.9669	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z	
20WP	16ALL		2 FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	399.1	0.10458	108.4642	G16-017-TAP 345.00 - G16035-TAPII345.00 345KV CKT 1	
20WP	16ALL		2 FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	399.1	0.10458	108.4392	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1	
20WP	16ALL		2 FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	399.1	0.10458	108.4392	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z	
20L	16ALL		2 FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	396.1	0.09913	109.8972	G16-017-TAP 345.00 - G16035-TAPII345.00 345KV CKT 1	
20L	16ALL		2 FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	396.1	0.09913	109.8467	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1	
20L	16ALL		2 FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	396.1	0.09913	109.8467	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z	
20L	16ALL		2 FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	398.7	0.09913	109.2558	G16-017-TAP 345.00 - G16035-TAPII345.00 345KV CKT 1	
20L	16ALL		2 FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	398.7	0.09913	109.2056	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z	
20L	16ALL		2 FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	398.7	0.09913	109.2056	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1	
17SP	16ALL		2 FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	384.6	0.09805	132.8268	P12:345:UMZB:# 109 #: LOS GRT IN ND. LOS GRT	
17SP	16ALL		2 FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	394.9	0.09805	129.5396	P12:345:UMZB:# 109 #: LOS GRT IN ND. LOS GRT	
17SP	16ALL		2 FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	384.6	0.09805	130.1201	LELAND OLDS - LELAND1-LNX3345.00 345KV CKT Z	
17SP	16ALL		2 FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	384.6	0.09805	129.7041	G16-044-TAP 345.00 - LELAND1-LNX3345.00 345KV CKT 1	
17SP	16ALL		2 FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	394.9	0.09805	126.8782	LELAND OLDS - LELAND1-LNX3345.00 345KV CKT Z	
17SP	16ALL		2 FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	394.9	0.09805	126.473	G16-044-TAP 345.00 - LELAND1-LNX3345.00 345KV CKT 1	
17SP	16ALL		2 FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	384.6	0.09805	149.8782	GROTON - GROTON-LNX3 345.00 345KV CKT Z	
17SP	16ALL		2 FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	384.6	0.09805	149.8782	G16-044-TAP 345.00 - GROTON-LNX3 345.00 345KV CKT 1	
17SP	16ALL		2 FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	394.9	0.09805	146.1209	GROTON - GROTON-LNX3 345.00 345KV CKT Z	
17SP	16ALL		2 FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	394.9	0.09805	146.1209	G16-044-TAP 345.00 - GROTON-LNX3 345.00 345KV CKT 1	
16WP	16ALL		2 FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	392.8	0.09648	114.8704	P12:345:UMZB:# 109 #: LOS GRT IN ND. LOS GRT	
16WP	16ALL		2 FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	397.5	0.09648	113.6128	P12:345:UMZB:# 109 #: LOS GRT IN ND. LOS GRT	
16WP	16ALL		2 FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	392.8	0.09648	112.2038	LELAND OLDS - LELAND1-LNX3345.00 345KV CKT Z	
16WP	16ALL		2 FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	392.8	0.09648	111.8729	G16-044-TAP 345.00 - LELAND1-LNX3345.00 345KV CKT 1	
16WP	16ALL		2 FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	392.8	0.09648	131.6768	GROTON - GROTON-LNX3 345.00 345KV CKT Z	
16WP	16ALL		2 FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	392.8	0.09648	131.6768	G16-044-TAP 345.00 - GROTON-LNX3 345.00 345KV CKT 1	
16WP	16ALL		2 FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	397.5	0.09648	110.9778	LELAND OLDS - LELAND1-LNX3345.00 345KV CKT Z	
16WP	16ALL		2 FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	397.5	0.09648	130.2456	GROTON - GROTON-LNX3 345.00 345KV CKT Z	
16WP	16ALL		2 FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	397.5	0.09648	130.2456	G16-044-TAP 345.00 - GROTON-LNX3 345.00 345KV CKT 1	
16WP	16ALL		2 FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	397.5	0.09648	110.6508	G16-044-TAP 345.00 - LELAND1-LNX3345.00 345KV CKT 1	
25SP	16ALL		2 FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	387	0.09523	126.9521	P12:345:UMZB:# 109 #: LOS GRT IN ND. LOS GRT	
25SP	16ALL		2 FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	395.5	0.09523	124.3754	P12:345:UMZB:# 109 #: LOS GRT IN ND. LOS GRT	
25SP	16ALL		2 FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	387	0.09523	124.2595	LELAND OLDS - LELAND1-LNX3345.00 345KV CKT Z	
25SP	16ALL		2 FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	387	0.09523	123.8977	G16-044-TAP 345.00 - LELAND1-LNX3345.00 345KV CKT 1	
25SP	16ALL		2 FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	395.5	0.09523	121.7154	LELAND OLDS - LELAND1-LNX3345.00 345KV CKT Z	
25SP	16ALL		2 FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	395.5	0.09523	121.3867	G16-044-TAP 345.00 - LELAND1-LNX3345.00 345KV CKT 1	
25SP	16ALL		2 FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	387	0.09523	143.5775	G16-044-TAP 345.00 - GROTON-LNX3 345.00 345KV CKT 1	

SEASON	GROUP	SCENARIO	DIRECTION	SOURCE	MONITORED ELEMENT	RATE		CONTINGENCY		CONTINGENCY
						(MVA)	TDF	LOADING %		
25SP	16ALL	2	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	387	0.09523	143.5775	GROTON - GROTON-LNX3 345.00 345KV CKT Z	
25SP	16ALL	2	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	395.5	0.09523	140.6435	G16-044-TAP 345.00 - GROTON-LNX3 345.00 345KV CKT 1	
25SP	16ALL	2	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	395.5	0.09523	140.6435	GROTON - GROTON-LNX3 345.00 345KV CKT Z	
17G	16ALL	2	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	388	0.09501	124.0825	P12:345:UMZB:# 109 #: LOS GRT IN ND. LOS GRT	
17G	16ALL	2	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	395.6	0.09501	121.8251	P12:345:UMZB:# 109 #: LOS GRT IN ND. LOS GRT	
17G	16ALL	2	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	388	0.09501	121.3714	LELAND OLDS - LELAND1-LNX3345.00 345KV CKT Z	
17G	16ALL	2	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	388	0.09501	120.9848	G16-044-TAP 345.00 - LELAND1-LNX3345.00 345KV CKT 1	
17G	16ALL	2	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	395.6	0.09501	119.1661	LELAND OLDS - LELAND1-LNX3345.00 345KV CKT Z	
17G	16ALL	2	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	395.6	0.09501	118.8122	G16-044-TAP 345.00 - LELAND1-LNX3345.00 345KV CKT 1	
17G	16ALL	2	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	388	0.09501	141.0337	G16-044-TAP 345.00 - GROTON-LNX3 345.00 345KV CKT 1	
17G	16ALL	2	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	388	0.09501	141.0337	GROTON - GROTON-LNX3 345.00 345KV CKT Z	
17G	16ALL	2	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	395.6	0.09501	138.4506	G16-044-TAP 345.00 - GROTON-LNX3 345.00 345KV CKT 1	
17G	16ALL	2	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	395.6	0.09501	138.4506	GROTON - GROTON-LNX3 345.00 345KV CKT Z	
20SP	16ALL	2	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	388.1	0.09481	124.078	P12:345:UMZB:# 109 #: LOS GRT IN ND. LOS GRT	
20SP	16ALL	2	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	395.8	0.09481	121.7905	P12:345:UMZB:# 109 #: LOS GRT IN ND. LOS GRT	
20SP	16ALL	2	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	388.1	0.09481	121.3861	LELAND OLDS - LELAND1-LNX3345.00 345KV CKT Z	
20SP	16ALL	2	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	388.1	0.09481	121.0511	G16-044-TAP 345.00 - LELAND1-LNX3345.00 345KV CKT 1	
20SP	16ALL	2	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	395.8	0.09481	119.1509	LELAND OLDS - LELAND1-LNX3345.00 345KV CKT Z	
20SP	16ALL	2	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	395.8	0.09481	118.8225	G16-044-TAP 345.00 - LELAND1-LNX3345.00 345KV CKT 1	
20SP	16ALL	2	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	388.1	0.09481	140.682	GROTON - GROTON-LNX3 345.00 345KV CKT Z	
20SP	16ALL	2	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	388.1	0.09481	140.682	G16-044-TAP 345.00 - GROTON-LNX3 345.00 345KV CKT 1	
20SP	16ALL	2	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	395.8	0.09481	138.0968	GROTON - GROTON-LNX3 345.00 345KV CKT Z	
20SP	16ALL	2	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	395.8	0.09481	138.0968	G16-044-TAP 345.00 - GROTON-LNX3 345.00 345KV CKT 1	
17SP	16ALL	0	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	384.4	0.09449	145.7883	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT	
17SP	16ALL	0	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	394.8	0.09449	142.1251	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT	
17SP	16ALL	0	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	384.4	0.09449	145.9704	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z	
17SP	16ALL	0	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	384.4	0.09449	145.1119	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1	
17SP	16ALL	0	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	384.4	0.09449	145.0078	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1	
17SP	16ALL	0	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	384.4	0.09449	145.0078	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z	
17SP	16ALL	0	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	394.8	0.09449	142.3025	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z	
17SP	16ALL	0	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	394.8	0.09449	141.4413	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1	
17SP	16ALL	0	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	394.8	0.09449	141.34	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1	
17SP	16ALL	0	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	394.8	0.09449	141.34	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z	
17SP	16ALL	2	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	384.6	0.09448	145.2444	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT	
17SP	16ALL	2	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	394.9	0.09448	141.6333	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT	
16WP	16ALL	0	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	392.8	0.09311	124.0285	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT	
16WP	16ALL	0	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	397.6	0.09311	122.6318	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT	
16WP	16ALL	2	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	392.8	0.09311	123.6466	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT	
16WP	16ALL	2	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	397.5	0.09311	122.2853	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT	
16WP	16ALL	0	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	392.8	0.09311	124.1049	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z	
16WP	16ALL	0	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	392.8	0.09311	123.6466	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1	
16WP	16ALL	0	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	392.8	0.09311	123.5703	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1	
16WP	16ALL	0	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	392.8	0.09311	123.5703	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z	
16WP	16ALL	0	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	397.6	0.09311	122.7324	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z	
16WP	16ALL	0	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	397.6	0.09311	122.2545	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1	
16WP	16ALL	0	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	397.6	0.09311	122.2042	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1	
16WP	16ALL	0	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	397.6	0.09311	122.2042	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z	
20WP	16ALL	2	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	396.8	0.09244	100.1325	P12:345:UMZB:# 109 #: LOS GRT IN ND. LOS GRT	
20WP	16ALL	2	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	396.8	0.09244	116.5993	GROTON - GROTON-LNX3 345.00 345KV CKT Z	
20WP	16ALL	2	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	396.8	0.09244	116.5993	G16-044-TAP 345.00 - GROTON-LNX3 345.00 345KV CKT 1	
20WP	16ALL	2	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	399.1	0.09244	116.0024	G16-044-TAP 345.00 - GROTON-LNX3 345.00 345KV CKT 1	
20WP	16ALL	2	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	399.1	0.09244	116.0024	GROTON - GROTON-LNX3 345.00 345KV CKT Z	
25SP	16ALL	0	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	386.9	0.09166	139.3088	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT	
25SP	16ALL	0	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	395.5	0.09166	136.406	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT	
25SP	16ALL	2	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	387	0.09166	138.756	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT	

SEASON	GROUP	SCENARIO	DIRECTION	SOURCE	MONITORED ELEMENT	RATE		CONTINGENCY		CONTINGENCY
						(MVA)	TDF	LOADING %		
25SP	16ALL	2	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	395.5	0.09166	135.9256	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT	
25SP	16ALL	0	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	386.9	0.09166	139.4639	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z	
25SP	16ALL	0	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	386.9	0.09166	138.7144	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1	
25SP	16ALL	0	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	386.9	0.09166	138.6109	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1	
25SP	16ALL	0	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	386.9	0.09166	138.6109	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z	
25SP	16ALL	0	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	395.5	0.09166	136.5577	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z	
25SP	16ALL	0	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	395.5	0.09166	135.8245	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1	
25SP	16ALL	0	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	395.5	0.09166	135.7486	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1	
25SP	16ALL	0	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	395.5	0.09166	135.7486	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z	
17G	16ALL	0	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	387.9	0.09127	135.5834	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT	
17G	16ALL	0	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	395.6	0.09127	133.0708	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT	
17G	16ALL	2	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	388	0.09127	135.1103	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT	
17G	16ALL	2	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	395.6	0.09127	132.6411	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT	
17G	16ALL	0	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	387.9	0.09127	135.7123	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z	
17G	16ALL	0	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	387.9	0.09127	135.0163	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1	
17G	16ALL	0	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	387.9	0.09127	134.9132	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1	
17G	16ALL	0	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	387.9	0.09127	134.9132	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z	
17G	16ALL	0	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	395.6	0.09127	133.2225	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z	
17G	16ALL	0	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	395.6	0.09127	132.5147	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1	
17G	16ALL	0	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	395.6	0.09127	132.4389	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1	
17G	16ALL	0	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	395.6	0.09127	132.4389	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z	
20SP	16ALL	0	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	388	0.09125	136.4247	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT	
20SP	16ALL	0	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	395.7	0.09125	133.8963	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT	
20SP	16ALL	2	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	388.1	0.09125	135.8742	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT	
20SP	16ALL	2	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	395.8	0.09125	133.3825	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT	
20SP	16ALL	0	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	388	0.09125	136.5536	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z	
20SP	16ALL	0	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	388	0.09125	135.8577	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1	
20SP	16ALL	0	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	388	0.09125	135.7804	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z	
20SP	16ALL	0	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	388	0.09125	135.7804	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1	
20SP	16ALL	0	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	395.7	0.09125	134.048	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z	
20SP	16ALL	0	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	395.7	0.09125	133.3656	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1	
20SP	16ALL	0	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	395.7	0.09125	133.2645	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z	
20SP	16ALL	0	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	395.7	0.09125	133.2645	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1	
17SP	16ALL	2	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	384.6	0.08937	134.6414	G09_0011ST 345.00 - WATERTOWN 345KV CKT 1	
17SP	16ALL	2	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	384.6	0.08937	133.8354	G09_0011ST 345.00 - GROTON 345KV CKT 1	
17SP	16ALL	2	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	394.9	0.08937	131.3069	G09_0011ST 345.00 - WATERTOWN 345KV CKT 1	
17SP	16ALL	2	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	394.9	0.08937	130.4965	G09_0011ST 345.00 - GROTON 345KV CKT 1	
17SP	16ALL	0	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	384.4	0.08912	133.0516	P12:345:UMZB:# 109 #: LOS GRT IN ND. LOS GRT	
17SP	16ALL	0	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	394.8	0.08912	129.724	P12:345:UMZB:# 109 #: LOS GRT IN ND. LOS GRT	
17SP	16ALL	0	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	384.4	0.08912	130.3248	LELAND OLDS - LELAND1-LNX3345.00 345KV CKT Z	
17SP	16ALL	0	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	384.4	0.08912	129.9086	G16-044-TAP 345.00 - LELAND1-LNX3345.00 345KV CKT 1	
17SP	16ALL	0	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	394.8	0.08912	127.0437	LELAND OLDS - LELAND1-LNX3345.00 345KV CKT Z	
17SP	16ALL	0	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	394.8	0.08912	126.6385	G16-044-TAP 345.00 - LELAND1-LNX3345.00 345KV CKT 1	
17SP	16ALL	0	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	384.4	0.08912	150.3233	GROTON - GROTON-LNX3 345.00 345KV CKT Z	
17SP	16ALL	0	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	384.4	0.08912	150.3233	G16-044-TAP 345.00 - GROTON-LNX3 345.00 345KV CKT 1	
17SP	16ALL	0	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	394.8	0.08912	146.5407	GROTON - GROTON-LNX3 345.00 345KV CKT Z	
17SP	16ALL	0	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	394.8	0.08912	146.5407	G16-044-TAP 345.00 - GROTON-LNX3 345.00 345KV CKT 1	
20WP	16ALL	0	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	396.8	0.08884	111.157	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT	
20WP	16ALL	0	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	399.1	0.08884	110.5915	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT	
20WP	16ALL	2	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	396.8	0.08884	110.8042	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT	
20WP	16ALL	2	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	399.1	0.08884	110.2408	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT	
20WP	16ALL	0	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	396.8	0.08884	111.2326	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z	
20WP	16ALL	0	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	396.8	0.08884	110.8546	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1	
20WP	16ALL	0	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	396.8	0.08884	110.8042	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1	
20WP	16ALL	0	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	396.8	0.08884	110.8042	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z	

SEASON	GROUP	SCENARIO	DIRECTION	SOURCE	MONITORED ELEMENT	RATE		CONTINGENCY		CONTINGENCY
						(MVA)	TDF	LOADING %		
20WP	16ALL	0	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	399.1	0.08884	110.6667	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z	
20WP	16ALL	0	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	399.1	0.08884	110.2909	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1	
20WP	16ALL	0	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	399.1	0.08884	110.2408	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1	
20WP	16ALL	0	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	399.1	0.08884	110.2408	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z	
16WP	16ALL	2	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	392.8	0.08797	115.3202	G09_0011ST 345.00 - WATERTOWN 345KV CKT 1	
16WP	16ALL	2	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	392.8	0.08797	114.4546	G09_0011ST 345.00 - GROTON 345KV CKT 1	
16WP	16ALL	2	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	397.5	0.08797	114.0573	G09_0011ST 345.00 - WATERTOWN 345KV CKT 1	
16WP	16ALL	2	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	397.5	0.08797	113.202	G09_0011ST 345.00 - GROTON 345KV CKT 1	
17SP	16ALL	2	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	384.6	0.08758	127.4458	BISON - HETINGER 230KV CKT 1	
17SP	16ALL	2	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	394.9	0.08758	124.2736	BISON - HETINGER 230KV CKT 1	
16WP	16ALL	0	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	392.8	0.08755	114.8445	P12:345:UMZB:# 109 #: LOS GRT IN ND. LOS GRT	
16WP	16ALL	0	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	397.6	0.08755	113.5587	P12:345:UMZB:# 109 #: LOS GRT IN ND. LOS GRT	
16WP	16ALL	0	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	392.8	0.08755	112.1343	LELAND OLDS - LELAND1-LNX3345.00 345KV CKT Z	
16WP	16ALL	0	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	392.8	0.08755	111.8033	G16-044-TAP 345.00 - LELAND1-LNX3345.00 345KV CKT 1	
16WP	16ALL	0	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	397.6	0.08755	110.8811	LELAND OLDS - LELAND1-LNX3345.00 345KV CKT Z	
16WP	16ALL	0	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	392.8	0.08755	131.8555	G16-044-TAP 345.00 - GROTON-LNX3 345.00 345KV CKT 1	
16WP	16ALL	0	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	392.8	0.08755	131.8555	GROTON - GROTON-LNX3 345.00 345KV CKT Z	
16WP	16ALL	0	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	397.6	0.08755	110.5542	G16-044-TAP 345.00 - LELAND1-LNX3345.00 345KV CKT 1	
16WP	16ALL	0	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	397.6	0.08755	130.3895	G16-044-TAP 345.00 - GROTON-LNX3 345.00 345KV CKT 1	
16WP	16ALL	0	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	397.6	0.08755	130.3895	GROTON - GROTON-LNX3 345.00 345KV CKT Z	
20L	16ALL	2	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	396.1	0.08673	114.4778	GROTON - GROTON-LNX3 345.00 345KV CKT Z	
20L	16ALL	2	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	396.1	0.08673	114.4778	G16-044-TAP 345.00 - GROTON-LNX3 345.00 345KV CKT 1	
20L	16ALL	2	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	398.7	0.08673	113.8065	GROTON - GROTON-LNX3 345.00 345KV CKT Z	
20L	16ALL	2	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	398.7	0.08673	113.8065	G16-044-TAP 345.00 - GROTON-LNX3 345.00 345KV CKT 1	
17G	16ALL	2	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	388	0.08669	124.6217	G09_0011ST 345.00 - WATERTOWN 345KV CKT 1	
17G	16ALL	2	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	388	0.08669	123.7712	G09_0011ST 345.00 - GROTON 345KV CKT 1	
17G	16ALL	2	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	395.6	0.08669	122.3539	G09_0011ST 345.00 - WATERTOWN 345KV CKT 1	
17G	16ALL	2	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	395.6	0.08669	121.5198	G09_0011ST 345.00 - GROTON 345KV CKT 1	
25SP	16ALL	0	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	386.9	0.08615	127.081	P12:345:UMZB:# 109 #: LOS GRT IN ND. LOS GRT	
25SP	16ALL	0	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	395.5	0.08615	124.4693	P12:345:UMZB:# 109 #: LOS GRT IN ND. LOS GRT	
25SP	16ALL	0	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	386.9	0.08615	124.3691	LELAND OLDS - LELAND1-LNX3345.00 345KV CKT Z	
25SP	16ALL	0	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	386.9	0.08615	124.0073	G16-044-TAP 345.00 - LELAND1-LNX3345.00 345KV CKT 1	
25SP	16ALL	0	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	395.5	0.08615	121.8165	LELAND OLDS - LELAND1-LNX3345.00 345KV CKT Z	
25SP	16ALL	0	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	395.5	0.08615	121.4625	G16-044-TAP 345.00 - LELAND1-LNX3345.00 345KV CKT 1	
25SP	16ALL	0	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	386.9	0.08615	143.9558	G16-044-TAP 345.00 - GROTON-LNX3 345.00 345KV CKT 1	
25SP	16ALL	0	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	386.9	0.08615	143.9558	GROTON - GROTON-LNX3 345.00 345KV CKT Z	
25SP	16ALL	0	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	395.5	0.08615	140.9773	G16-044-TAP 345.00 - GROTON-LNX3 345.00 345KV CKT 1	
25SP	16ALL	0	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	395.5	0.08615	140.9773	GROTON - GROTON-LNX3 345.00 345KV CKT Z	
17G	16ALL	0	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	387.9	0.08609	124.0367	P12:345:UMZB:# 109 #: LOS GRT IN ND. LOS GRT	
17G	16ALL	0	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	395.6	0.08609	121.7488	P12:345:UMZB:# 109 #: LOS GRT IN ND. LOS GRT	
17G	16ALL	0	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	387.9	0.08609	121.3088	LELAND OLDS - LELAND1-LNX3345.00 345KV CKT Z	
17G	16ALL	0	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	387.9	0.08609	120.9221	G16-044-TAP 345.00 - LELAND1-LNX3345.00 345KV CKT 1	
17G	16ALL	0	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	395.6	0.08609	119.074	LELAND OLDS - LELAND1-LNX3345.00 345KV CKT Z	
17G	16ALL	0	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	395.6	0.08609	118.7201	G16-044-TAP 345.00 - LELAND1-LNX3345.00 345KV CKT 1	
17G	16ALL	0	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	387.9	0.08609	141.2018	G16-044-TAP 345.00 - GROTON-LNX3 345.00 345KV CKT 1	
17G	16ALL	0	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	387.9	0.08609	141.2018	GROTON - GROTON-LNX3 345.00 345KV CKT Z	
17G	16ALL	0	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	395.6	0.08609	138.6051	G16-044-TAP 345.00 - GROTON-LNX3 345.00 345KV CKT 1	
17G	16ALL	0	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	395.6	0.08609	138.6051	GROTON - GROTON-LNX3 345.00 345KV CKT Z	
17SP	16ALL	2	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	384.6	0.08597	126.885	CENTER - JAMESTOWN 345KV CKT 1	
17SP	16ALL	2	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	394.9	0.08597	123.7528	CENTER - JAMESTOWN 345KV CKT 1	
17SP	16ALL	2	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	384.6	0.08585	129.9582	BUFFALO - JAMESTOWN 345KV CKT 1	
17SP	16ALL	2	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	394.9	0.08585	126.7205	BUFFALO - JAMESTOWN 345KV CKT 1	
25SP	16ALL	2	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	387	0.0858	126.8414	G09_0011ST 345.00 - WATERTOWN 345KV CKT 1	
25SP	16ALL	2	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	387	0.0858	126.0662	G09_0011ST 345.00 - GROTON 345KV CKT 1	
25SP	16ALL	2	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	395.5	0.0858	124.267	G09_0011ST 345.00 - WATERTOWN 345KV CKT 1	

SEASON	GROUP	SCENARIO	DIRECTION	SOURCE	MONITORED ELEMENT	RATE		CONTINGENCY		CONTINGENCY
						(MVA)	TDF	LOADING %		
25SP	16ALL		2 FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	395.5	0.0858	123.5085	G09_001ST 345.00 - GROTON 345KV CKT 1	
20SP	16ALL		0 FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	388	0.08573	124.2315	P12:345:UMZB:# 109 #: LOS GRT IN ND. LOS GRT	
20SP	16ALL		0 FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	395.7	0.08573	121.9404	P12:345:UMZB:# 109 #: LOS GRT IN ND. LOS GRT	
20SP	16ALL		0 FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	388	0.08573	121.5204	LELAND OLDS - LELAND1-LNX3345.00 345KV CKT Z	
20SP	16ALL		0 FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	388	0.08573	121.1596	G16-044-TAP 345.00 - LELAND1-LNX3345.00 345KV CKT 1	
20SP	16ALL		0 FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	395.7	0.08573	119.2821	LELAND OLDS - LELAND1-LNX3345.00 345KV CKT Z	
20SP	16ALL		0 FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	395.7	0.08573	118.9536	G16-044-TAP 345.00 - LELAND1-LNX3345.00 345KV CKT 1	
20SP	16ALL		0 FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	388	0.08573	141.0843	G16-044-TAP 345.00 - GROTON-LNX3 345.00 345KV CKT 1	
20SP	16ALL		0 FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	388	0.08573	141.0843	GROTON - GROTON-LNX3 345.00 345KV CKT Z	
20SP	16ALL		0 FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	395.7	0.08573	138.4653	GROTON - GROTON-LNX3 345.00 345KV CKT Z	
20SP	16ALL		0 FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	395.7	0.08573	138.4653	G16-044-TAP 345.00 - GROTON-LNX3 345.00 345KV CKT 1	
20SP	16ALL		2 FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	388.1	0.08542	124.4125	G09_0011ST 345.00 - WATERTOWN 345KV CKT 1	
20SP	16ALL		2 FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	388.1	0.08542	123.6137	G09_0011ST 345.00 - GROTON 345KV CKT 1	
20SP	16ALL		2 FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	395.8	0.08542	122.1185	G09_0011ST 345.00 - WATERTOWN 345KV CKT 1	
20SP	16ALL		2 FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	395.8	0.08542	121.3605	G09_0011ST 345.00 - GROTON 345KV CKT 1	
25SP	16ALL		2 FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	387	0.0851	122.4646	BISON - HETINGER 230KV CKT 1	
25SP	16ALL		2 FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	395.5	0.0851	119.9591	BISON - HETINGER 230KV CKT 1	
17SP	16ALL		2 FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	384.6	0.08487	138.6947	RIEL - ROSEAU 500KV CKT 1	
17SP	16ALL		2 FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	384.6	0.08487	138.2007	ROSEAU - ROSEAU 2 500.00 500KV CKT 1	
17SP	16ALL		2 FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	384.6	0.08487	138.2007	ROSEAU - ROSEAU 2 500.00 500KV CKT 1	
17SP	16ALL		2 FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	384.6	0.08487	137.7066	FORBES - ROSEAU 500KV CKT 1	
17SP	16ALL		2 FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	394.9	0.08487	135.2544	RIEL - ROSEAU 500KV CKT 1	
17SP	16ALL		2 FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	394.9	0.08487	134.7733	ROSEAU - ROSEAU 2 500.00 500KV CKT 1	
17SP	16ALL		2 FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	394.9	0.08487	134.7733	ROSEAU - ROSEAU 2 500.00 500KV CKT 1	
17SP	16ALL		2 FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	394.9	0.08487	134.2668	FORBES - ROSEAU 500KV CKT 1	
17G	16ALL		2 FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	388	0.08484	117.9415	BISON - HETINGER 230KV CKT 1	
17G	16ALL		2 FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	395.6	0.08484	115.8021	BISON - HETINGER 230KV CKT 1	
20SP	16ALL		2 FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	388.1	0.08475	119.767	BISON - HETINGER 230KV CKT 1	
20SP	16ALL		2 FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	395.8	0.08475	117.5634	BISON - HETINGER 230KV CKT 1	
16WP	16ALL		2 FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	392.8	0.08466	109.5284	CENTER - JAMESTOWN 345KV CKT 1	
16WP	16ALL		2 FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	397.5	0.08466	108.3339	CENTER - JAMESTOWN 345KV CKT 1	
16WP	16ALL		2 FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	392.8	0.08455	113.1507	BUFFALO - JAMESTOWN 345KV CKT 1	
16WP	16ALL		2 FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	397.5	0.08455	111.9134	BUFFALO - JAMESTOWN 345KV CKT 1	
25SP	16ALL		2 FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	387	0.08393	122.4415	CENTER - JAMESTOWN 345KV CKT 1	
25SP	16ALL		2 FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	395.5	0.08393	119.9364	CENTER - JAMESTOWN 345KV CKT 1	
25SP	16ALL		2 FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	387	0.08374	125.8199	BUFFALO - JAMESTOWN 345KV CKT 1	
25SP	16ALL		2 FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	395.5	0.08374	123.2423	BUFFALO - JAMESTOWN 345KV CKT 1	
16WP	16ALL		2 FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	392.8	0.08358	114.1459	RIEL - ROSEAU 500KV CKT 1	
16WP	16ALL		2 FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	392.8	0.08358	113.9677	ROSEAU - ROSEAU 2 500.00 500KV CKT 1	
16WP	16ALL		2 FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	392.8	0.08358	113.9677	ROSEAU - ROSEAU 2 500.00 500KV CKT 1	
16WP	16ALL		2 FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	392.8	0.08358	113.7895	FORBES - ROSEAU 500KV CKT 1	
16WP	16ALL		2 FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	397.5	0.08358	112.8969	RIEL - ROSEAU 500KV CKT 1	
16WP	16ALL		2 FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	397.5	0.08358	112.7208	ROSEAU - ROSEAU 2 500.00 500KV CKT 1	
16WP	16ALL		2 FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	397.5	0.08358	112.7208	ROSEAU - ROSEAU 2 500.00 500KV CKT 1	
16WP	16ALL		2 FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	397.5	0.08358	112.5447	FORBES - ROSEAU 500KV CKT 1	
20SP	16ALL		2 FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	388.1	0.08358	119.5401	CENTER - JAMESTOWN 345KV CKT 1	
20SP	16ALL		2 FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	395.8	0.08358	117.3661	CENTER - JAMESTOWN 345KV CKT 1	
20SP	16ALL		2 FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	388.1	0.08339	122.8832	BUFFALO - JAMESTOWN 345KV CKT 1	
20SP	16ALL		2 FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	395.8	0.08339	120.619	BUFFALO - JAMESTOWN 345KV CKT 1	
20WP	16ALL		0 FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	396.8	0.08335	100.0956	P12:345:UMZB:# 109 #: LOS GRT IN ND. LOS GRT	
20WP	16ALL		0 FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	396.8	0.08335	116.8037	GROTON - GROTON-LNX3 345.00 345KV CKT Z	
20WP	16ALL		0 FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	396.8	0.08335	116.8037	G16-044-TAP 345.00 - GROTON-LNX3 345.00 345KV CKT 1	
20WP	16ALL		0 FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	399.1	0.08335	116.2057	GROTON - GROTON-LNX3 345.00 345KV CKT Z	
20WP	16ALL		0 FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	399.1	0.08335	116.2057	G16-044-TAP 345.00 - GROTON-LNX3 345.00 345KV CKT 1	
17G	16ALL		2 FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	388	0.08335	118.1843	CENTER - JAMESTOWN 345KV CKT 1	

SEASON	GROUP	SCENARIO	DIRECTION	SOURCE	MONITORED ELEMENT	RATE		CONTINGENCY		CONTINGENCY
						(MVA)	TDF	LOADING %		
17G	16ALL		2 FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	395.6	0.08335	116.0655	CENTER - JAMESTOWN 345KV CKT 1	
20L	16ALL		0 FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	396.1	0.0833	111.8184	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT	
20L	16ALL		0 FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	398.7	0.0833	111.1895	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT	
20L	16ALL		2 FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	396.1	0.0833	111.5406	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT	
20L	16ALL		2 FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	398.7	0.0833	110.8885	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT	
20L	16ALL		0 FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	396.1	0.0833	111.9193	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z	
20L	16ALL		0 FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	396.1	0.0833	111.4649	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1	
20L	16ALL		0 FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	396.1	0.0833	111.3892	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1	
20L	16ALL		0 FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	396.1	0.0833	111.3892	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z	
20L	16ALL		0 FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	398.7	0.0833	111.2898	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z	
20L	16ALL		0 FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	398.7	0.0833	110.8133	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1	
20L	16ALL		0 FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	398.7	0.0833	110.7631	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1	
20L	16ALL		0 FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	398.7	0.0833	110.7631	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z	
20WP	16ALL		2 FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	396.8	0.08329	102.8071	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	
20WP	16ALL		2 FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	399.1	0.08329	102.2898	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	
20WP	16ALL		2 FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	396.8	0.08329	102.0258	G09_001IST 345.00 - GROTON 345KV CKT 1	
20WP	16ALL		2 FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	399.1	0.08329	101.513	G09_001IST 345.00 - GROTON 345KV CKT 1	
17G	16ALL		2 FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	388	0.08324	121.2844	BUFFALO - JAMESTOWN 345KV CKT 1	
17G	16ALL		2 FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	395.6	0.08324	119.0807	BUFFALO - JAMESTOWN 345KV CKT 1	
16WP	16ALL		2 FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	392.8	0.08295	108.7907	BISON 3 345.00 - BUFFALO 345KV CKT 1	
16WP	16ALL		2 FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	397.5	0.08295	107.605	BISON 3 345.00 - BUFFALO 345KV CKT 1	
25SP	16ALL		2 FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	387	0.08259	132.0363	RIEL - ROSEAU 500KV CKT 1	
25SP	16ALL		2 FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	387	0.08259	131.6228	ROSEAU - ROSEAUM 2 500.00 500KV CKT 1	
25SP	16ALL		2 FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	387	0.08259	131.6228	ROSEAU - ROSEAUM 2 500.00 500KV CKT 1	
25SP	16ALL		2 FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	387	0.08259	131.1835	FORBES - ROSEAU 500KV CKT 1	
25SP	16ALL		2 FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	395.5	0.08259	129.3503	RIEL - ROSEAU 500KV CKT 1	
25SP	16ALL		2 FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	395.5	0.08259	128.9204	ROSEAU - ROSEAUM 2 500.00 500KV CKT 1	
25SP	16ALL		2 FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	395.5	0.08259	128.9204	ROSEAU - ROSEAUM 2 500.00 500KV CKT 1	
25SP	16ALL		2 FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	395.5	0.08259	128.4906	FORBES - ROSEAU 500KV CKT 1	
17G	16ALL		2 FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	388	0.08227	126.5468	RIEL - ROSEAU 500KV CKT 1	
17G	16ALL		2 FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	388	0.08227	126.2375	ROSEAU - ROSEAUM 2 500.00 500KV CKT 1	
17G	16ALL		2 FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	388	0.08227	126.2375	ROSEAU - ROSEAUM 2 500.00 500KV CKT 1	
17G	16ALL		2 FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	388	0.08227	125.9025	FORBES - ROSEAU 500KV CKT 1	
17G	16ALL		2 FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	395.6	0.08227	124.2673	RIEL - ROSEAU 500KV CKT 1	
17G	16ALL		2 FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	395.6	0.08227	123.9387	ROSEAU - ROSEAUM 2 500.00 500KV CKT 1	
17G	16ALL		2 FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	395.6	0.08227	123.9387	ROSEAU - ROSEAUM 2 500.00 500KV CKT 1	
17G	16ALL		2 FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	395.6	0.08227	123.6101	FORBES - ROSEAU 500KV CKT 1	
20SP	16ALL		2 FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	388.1	0.08226	130.4803	RIEL - ROSEAU 500KV CKT 1	
20SP	16ALL		2 FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	388.1	0.08226	129.9907	ROSEAU - ROSEAUM 2 500.00 500KV CKT 1	
20SP	16ALL		2 FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	388.1	0.08226	129.9907	ROSEAU - ROSEAUM 2 500.00 500KV CKT 1	
20SP	16ALL		2 FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	388.1	0.08226	129.5269	FORBES - ROSEAU 500KV CKT 1	
20SP	16ALL		2 FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	395.8	0.08226	128.0682	RIEL - ROSEAU 500KV CKT 1	
20SP	16ALL		2 FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	395.8	0.08226	127.6134	ROSEAU - ROSEAUM 2 500.00 500KV CKT 1	
20SP	16ALL		2 FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	395.8	0.08226	127.6134	ROSEAU - ROSEAUM 2 500.00 500KV CKT 1	
20SP	16ALL		2 FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	395.8	0.08226	127.1334	FORBES - ROSEAU 500KV CKT 1	
17SP	16ALL		0 FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	384.4	0.08211	134.8211	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	
17SP	16ALL		0 FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	384.4	0.08211	133.9887	G09_001IST 345.00 - GROTON 345KV CKT 1	
17SP	16ALL		0 FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	394.8	0.08211	131.4469	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	
17SP	16ALL		0 FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	394.8	0.08211	130.6364	G09_001IST 345.00 - GROTON 345KV CKT 1	
20WP	16ALL		2 FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	396.8	0.08131	102.1291	BUFFALO - JAMESTOWN 345KV CKT 1	
20WP	16ALL		2 FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	399.1	0.08131	101.6157	BUFFALO - JAMESTOWN 345KV CKT 1	
17SP	16ALL		0 FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	384.4	0.08072	127.5131	BISON - HETINGER 230KV CKT 1	
17SP	16ALL		0 FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	384.4	0.08072	126.9928	BISON - MAURINE 230KV CKT 1	
17SP	16ALL		0 FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	394.8	0.08072	124.3061	BISON - HETINGER 230KV CKT 1	
17SP	16ALL		0 FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	394.8	0.08072	123.7995	BISON - MAURINE 230KV CKT 1	

SEASON	GROUP	SCENARIO	DIRECTION	SOURCE	MONITORED ELEMENT	RATE		CONTINGENCY		CONTINGENCY
						(MVA)	TDF	LOADING %		
16WP	16ALL	0	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	392.8	0.08071	115.2494	G09_001ST 345.00 - WATERTOWN 345KV CKT 1	
16WP	16ALL	0	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	392.8	0.08071	114.3838	G09_001ST 345.00 - GROTON 345KV CKT 1	
16WP	16ALL	0	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	397.6	0.08071	113.9586	G09_001ST 345.00 - WATERTOWN 345KV CKT 1	
16WP	16ALL	0	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	397.6	0.08071	113.1035	G09_001ST 345.00 - GROTON 345KV CKT 1	
20WP	16ALL	2	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	396.8	0.08017	103.0301	RIEL - ROSEAU 500KV CKT 1	
20WP	16ALL	2	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	396.8	0.08017	102.8285	ROSEAU - ROSEAU 2 500.00 500KV CKT 1	
20WP	16ALL	2	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	396.8	0.08017	102.8285	ROSEAU - ROSEAU 2 500.00 500KV CKT 1	
20WP	16ALL	2	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	396.8	0.08017	102.6521	FORBES - ROSEAU 500KV CKT 1	
20WP	16ALL	2	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	399.1	0.08017	102.5115	RIEL - ROSEAU 500KV CKT 1	
20WP	16ALL	2	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	399.1	0.08017	102.3111	ROSEAU - ROSEAU 2 500.00 500KV CKT 1	
20WP	16ALL	2	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	399.1	0.08017	102.3111	ROSEAU - ROSEAU 2 500.00 500KV CKT 1	
20WP	16ALL	2	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	399.1	0.08017	102.1356	FORBES - ROSEAU 500KV CKT 1	
16WP	16ALL	0	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	392.8	0.07944	108.4813	BISON - HETINGER 230KV CKT 1	
16WP	16ALL	0	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	397.6	0.07944	107.2723	BISON - HETINGER 230KV CKT 1	
17G	16ALL	0	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	387.9	0.07943	124.5821	G09_001ST 345.00 - WATERTOWN 345KV CKT 1	
17G	16ALL	0	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	387.9	0.07943	123.7056	G09_001ST 345.00 - GROTON 345KV CKT 1	
17G	16ALL	0	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	395.6	0.07943	122.2836	G09_001ST 345.00 - WATERTOWN 345KV CKT 1	
17G	16ALL	0	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	395.6	0.07943	121.4241	G09_001ST 345.00 - GROTON 345KV CKT 1	
17SP	16ALL	0	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	384.4	0.07941	126.907	CENTER - JAMESTOWN 345KV CKT 1	
17SP	16ALL	0	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	394.8	0.07941	123.716	CENTER - JAMESTOWN 345KV CKT 1	
17SP	16ALL	0	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	384.4	0.07929	129.9298	BUFFALO - JAMESTOWN 345KV CKT 1	
17SP	16ALL	0	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	394.8	0.07929	126.6591	BUFFALO - JAMESTOWN 345KV CKT 1	
25SP	16ALL	0	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	386.9	0.07833	126.955	G09_001ST 345.00 - WATERTOWN 345KV CKT 1	
25SP	16ALL	0	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	386.9	0.07833	126.1796	G09_001ST 345.00 - GROTON 345KV CKT 1	
25SP	16ALL	0	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	395.5	0.07833	124.3461	G09_001ST 345.00 - WATERTOWN 345KV CKT 1	
25SP	16ALL	0	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	395.5	0.07833	123.5623	G09_001ST 345.00 - GROTON 345KV CKT 1	
17SP	16ALL	0	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	384.4	0.07825	138.5904	RIEL - ROSEAU 500KV CKT 1	
17SP	16ALL	0	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	384.4	0.07825	138.0961	ROSEAU - ROSEAU 2 500.00 500KV CKT 1	
17SP	16ALL	0	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	384.4	0.07825	138.0961	ROSEAU - ROSEAU 2 500.00 500KV CKT 1	
17SP	16ALL	0	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	384.4	0.07825	137.6018	FORBES - ROSEAU 500KV CKT 1	
17SP	16ALL	0	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	394.8	0.07825	135.1169	RIEL - ROSEAU 500KV CKT 1	
17SP	16ALL	0	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	394.8	0.07825	134.6356	ROSEAU - ROSEAU 2 500.00 500KV CKT 1	
17SP	16ALL	0	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	394.8	0.07825	134.6356	ROSEAU - ROSEAU 2 500.00 500KV CKT 1	
17SP	16ALL	0	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	394.8	0.07825	134.129	FORBES - ROSEAU 500KV CKT 1	
20L	16ALL	2	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	396.1	0.07816	100.4663	G09_001ST 345.00 - WATERTOWN 345KV CKT 1	
16WP	16ALL	0	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	392.8	0.0781	109.3325	CENTER - JAMESTOWN 345KV CKT 1	
16WP	16ALL	0	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	397.6	0.0781	108.1132	CENTER - JAMESTOWN 345KV CKT 1	
25SP	16ALL	0	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	386.9	0.07806	122.4386	BISON - HETINGER 230KV CKT 1	
25SP	16ALL	0	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	395.5	0.07806	119.928	BISON - HETINGER 230KV CKT 1	
16WP	16ALL	0	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	392.8	0.07799	112.9294	BUFFALO - JAMESTOWN 345KV CKT 1	
16WP	16ALL	0	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	397.6	0.07799	111.6666	BUFFALO - JAMESTOWN 345KV CKT 1	
17G	16ALL	0	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	387.9	0.07799	117.7925	BISON - HETINGER 230KV CKT 1	
17G	16ALL	0	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	395.6	0.07799	115.6261	BISON - HETINGER 230KV CKT 1	
20SP	16ALL	0	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	388	0.07795	124.5252	G09_001ST 345.00 - WATERTOWN 345KV CKT 1	
20SP	16ALL	0	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	388	0.07795	123.752	G09_001ST 345.00 - GROTON 345KV CKT 1	
20SP	16ALL	0	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	395.7	0.07795	122.2284	G09_001ST 345.00 - WATERTOWN 345KV CKT 1	
20SP	16ALL	0	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	395.7	0.07795	121.4702	G09_001ST 345.00 - GROTON 345KV CKT 1	
20SP	16ALL	0	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	388	0.07771	119.7943	BISON - HETINGER 230KV CKT 1	
20SP	16ALL	0	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	395.7	0.07771	117.5895	BISON - HETINGER 230KV CKT 1	
20L	16ALL	0	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	396.1	0.07763	114.5036	G16-044-TAP 345.00 - GROTON-LNX3 345.00 345KV CKT 1	
20L	16ALL	0	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	396.1	0.07763	114.5036	GROTON - GROTON-LNX3 345.00 345KV CKT 2	
20L	16ALL	0	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	398.7	0.07763	113.8321	G16-044-TAP 345.00 - GROTON-LNX3 345.00 345KV CKT 1	
20L	16ALL	0	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	398.7	0.07763	113.8321	GROTON - GROTON-LNX3 345.00 345KV CKT 2	
25SP	16ALL	0	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	386.9	0.07718	122.3472	CENTER - JAMESTOWN 345KV CKT 1	
25SP	16ALL	0	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	395.5	0.07718	119.8385	CENTER - JAMESTOWN 345KV CKT 1	

SEASON	GROUP	SCENARIO	DIRECTION	SOURCE	MONITORED ELEMENT	RATE		CONTINGENCY		CONTINGENCY
						(MVA)	TDF	LOADING %		
25SP	16ALL	0	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	386.9	0.07699	125.7265	BUFFALO - JAMESTOWN 345KV CKT 1	
25SP	16ALL	0	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	395.5	0.07699	123.1191	BUFFALO - JAMESTOWN 345KV CKT 1	
16WP	16ALL	0	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	392.8	0.07696	113.9223	RIEL - ROSEAU 500KV CKT 1	
16WP	16ALL	0	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	392.8	0.07696	113.7186	ROSEAU - ROSEAU 2 500.00 500KV CKT 1	
16WP	16ALL	0	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	392.8	0.07696	113.7186	ROSEAU - ROSEAU 2 500.00 500KV CKT 1	
16WP	16ALL	0	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	392.8	0.07696	113.5404	FORBES - ROSEAU 500KV CKT 1	
16WP	16ALL	0	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	397.6	0.07696	112.6476	RIEL - ROSEAU 500KV CKT 1	
16WP	16ALL	0	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	397.6	0.07696	112.4464	ROSEAU - ROSEAU 2 500.00 500KV CKT 1	
16WP	16ALL	0	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	397.6	0.07696	112.4464	ROSEAU - ROSEAU 2 500.00 500KV CKT 1	
16WP	16ALL	0	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	397.6	0.07696	112.2703	FORBES - ROSEAU 500KV CKT 1	
20SP	16ALL	0	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	388	0.07683	119.4969	CENTER - JAMESTOWN 345KV CKT 1	
20SP	16ALL	0	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	395.7	0.07683	117.3232	CENTER - JAMESTOWN 345KV CKT 1	
17G	16ALL	0	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	387.9	0.0768	118.0187	CENTER - JAMESTOWN 345KV CKT 1	
17G	16ALL	0	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	395.6	0.0768	115.848	CENTER - JAMESTOWN 345KV CKT 1	
17G	16ALL	0	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	387.9	0.07669	121.0681	BUFFALO - JAMESTOWN 345KV CKT 1	
17G	16ALL	0	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	395.6	0.07669	118.838	BUFFALO - JAMESTOWN 345KV CKT 1	
20SP	16ALL	0	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	388	0.07664	122.8151	BUFFALO - JAMESTOWN 345KV CKT 1	
20SP	16ALL	0	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	395.7	0.07664	120.5516	BUFFALO - JAMESTOWN 345KV CKT 1	
16WP	16ALL	0	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	392.8	0.07633	108.5925	BISON 3 345.00 - BUFFALO 345KV CKT 1	
16WP	16ALL	0	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	397.6	0.07633	107.3821	BISON 3 345.00 - BUFFALO 345KV CKT 1	
20WP	16ALL	0	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	396.8	0.07581	102.7851	G09_0011ST 345.00 - WATERTOWN 345KV CKT 1	
20WP	16ALL	0	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	399.1	0.07581	102.2679	G09_0011ST 345.00 - WATERTOWN 345KV CKT 1	
20WP	16ALL	0	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	396.8	0.07581	102.0039	G09_0011ST 345.00 - GROTON 345KV CKT 1	
20WP	16ALL	0	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	399.1	0.07581	101.4912	G09_0011ST 345.00 - GROTON 345KV CKT 1	
25SP	16ALL	0	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	386.9	0.07578	131.8881	RIEL - ROSEAU 500KV CKT 1	
25SP	16ALL	0	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	386.9	0.07578	131.4487	ROSEAU - ROSEAU 2 500.00 500KV CKT 1	
25SP	16ALL	0	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	386.9	0.07578	131.4487	ROSEAU - ROSEAU 2 500.00 500KV CKT 1	
25SP	16ALL	0	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	386.9	0.07578	131.0093	FORBES - ROSEAU 500KV CKT 1	
25SP	16ALL	0	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	395.5	0.07578	129.1467	RIEL - ROSEAU 500KV CKT 1	
25SP	16ALL	0	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	395.5	0.07578	128.7421	ROSEAU - ROSEAU 2 500.00 500KV CKT 1	
25SP	16ALL	0	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	395.5	0.07578	128.7421	ROSEAU - ROSEAU 2 500.00 500KV CKT 1	
25SP	16ALL	0	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	395.5	0.07578	128.3123	FORBES - ROSEAU 500KV CKT 1	
17G	16ALL	0	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	387.9	0.07566	126.2757	RIEL - ROSEAU 500KV CKT 1	
17G	16ALL	0	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	387.9	0.07566	125.9663	ROSEAU - ROSEAU 2 500.00 500KV CKT 1	
17G	16ALL	0	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	387.9	0.07566	125.9663	ROSEAU - ROSEAU 2 500.00 500KV CKT 1	
17G	16ALL	0	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	387.9	0.07566	125.6312	FORBES - ROSEAU 500KV CKT 1	
17G	16ALL	0	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	395.6	0.07566	123.9695	RIEL - ROSEAU 500KV CKT 1	
17G	16ALL	0	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	395.6	0.07566	123.6409	ROSEAU - ROSEAU 2 500.00 500KV CKT 1	
17G	16ALL	0	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	395.6	0.07566	123.6409	ROSEAU - ROSEAU 2 500.00 500KV CKT 1	
17G	16ALL	0	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	395.6	0.07566	123.3123	FORBES - ROSEAU 500KV CKT 1	
20SP	16ALL	0	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	388	0.07545	130.3064	RIEL - ROSEAU 500KV CKT 1	
20SP	16ALL	0	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	388	0.07545	129.8425	ROSEAU - ROSEAU 2 500.00 500KV CKT 1	
20SP	16ALL	0	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	388	0.07545	129.8425	ROSEAU - ROSEAU 2 500.00 500KV CKT 1	
20SP	16ALL	0	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	388	0.07545	129.3785	FORBES - ROSEAU 500KV CKT 1	
20SP	16ALL	0	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	395.7	0.07545	127.9223	RIEL - ROSEAU 500KV CKT 1	
20SP	16ALL	0	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	395.7	0.07545	127.4675	ROSEAU - ROSEAU 2 500.00 500KV CKT 1	
20SP	16ALL	0	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	395.7	0.07545	127.4675	ROSEAU - ROSEAU 2 500.00 500KV CKT 1	
20SP	16ALL	0	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	395.7	0.07545	126.9873	FORBES - ROSEAU 500KV CKT 1	
25SP	16ALL	0	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	386.9	0.07537	121.0956	BISON 3 345.00 - BUFFALO 345KV CKT 1	
25SP	16ALL	0	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	395.5	0.07537	118.5888	BISON 3 345.00 - BUFFALO 345KV CKT 1	
20L	16ALL	2	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	396.1	0.07529	102.9426	RIEL - ROSEAU 500KV CKT 1	
20L	16ALL	2	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	396.1	0.07529	102.7154	ROSEAU - ROSEAU 2 500.00 500KV CKT 1	
20L	16ALL	2	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	396.1	0.07529	102.7154	ROSEAU - ROSEAU 2 500.00 500KV CKT 1	
20L	16ALL	2	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	396.1	0.07529	102.5387	FORBES - ROSEAU 500KV CKT 1	
20L	16ALL	2	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	398.7	0.07529	102.3465	RIEL - ROSEAU 500KV CKT 1	

SEASON	GROUP	SCENARIO	DIRECTION	SOURCE	MONITORED ELEMENT	RATE		CONTINGENCY		CONTINGENCY
						(MVA)	TDF	LOADING %		
20L	16ALL	2	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	398.7	0.07529	102.1459	ROSEAU - ROSEAU 2 500.00 500KV CKT 1	
20L	16ALL	2	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	398.7	0.07529	102.1459	ROSEAU - ROSEAU 2 500.00 500KV CKT 1	
20L	16ALL	2	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	398.7	0.07529	101.9453	FORBES - ROSEAU 500KV CKT 1	
17G	16ALL	0	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	387.9	0.07502	116.8546	BISON 3 345.00 - BUFFALO 345KV CKT 1	
17G	16ALL	0	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	395.6	0.07502	114.7065	BISON 3 345.00 - BUFFALO 345KV CKT 1	
20SP	16ALL	0	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	388	0.07502	118.4292	BISON 3 345.00 - BUFFALO 345KV CKT 1	
20SP	16ALL	0	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	395.7	0.07502	116.2511	BISON 3 345.00 - BUFFALO 345KV CKT 1	
20WP	16ALL	0	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	396.8	0.07455	101.9285	BUFFALO - JAMESTOWN 345KV CKT 1	
20WP	16ALL	0	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	399.1	0.07455	101.4413	BUFFALO - JAMESTOWN 345KV CKT 1	
20WP	16ALL	0	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	396.8	0.07336	102.802	RIEL - ROSEAU 500KV CKT 1	
20WP	16ALL	0	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	396.8	0.07336	102.6256	ROSEAU - ROSEAU 2 500.00 500KV CKT 1	
20WP	16ALL	0	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	396.8	0.07336	102.6256	ROSEAU - ROSEAU 2 500.00 500KV CKT 1	
20WP	16ALL	0	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	396.8	0.07336	102.4491	FORBES - ROSEAU 500KV CKT 1	
20WP	16ALL	0	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	399.1	0.07336	102.2847	RIEL - ROSEAU 500KV CKT 1	
20WP	16ALL	0	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	399.1	0.07336	102.1093	ROSEAU - ROSEAU 2 500.00 500KV CKT 1	
20WP	16ALL	0	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	399.1	0.07336	102.1093	ROSEAU - ROSEAU 2 500.00 500KV CKT 1	
20WP	16ALL	0	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	399.1	0.07336	101.9339	FORBES - ROSEAU 500KV CKT 1	
20L	16ALL	0	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	396.1	0.07069	100.3433	G09_001ST 345.00 - WATERTOWN 345KV CKT 1	
20L	16ALL	0	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	396.1	0.06848	102.6384	RIEL - ROSEAU 500KV CKT 1	
20L	16ALL	0	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	396.1	0.06848	102.4364	ROSEAU - ROSEAU 2 500.00 500KV CKT 1	
20L	16ALL	0	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	396.1	0.06848	102.4364	ROSEAU - ROSEAU 2 500.00 500KV CKT 1	
20L	16ALL	0	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	396.1	0.06848	102.2344	FORBES - ROSEAU 500KV CKT 1	
20L	16ALL	0	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	398.7	0.06848	102.0443	RIEL - ROSEAU 500KV CKT 1	
20L	16ALL	0	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	398.7	0.06848	101.8436	ROSEAU - ROSEAU 2 500.00 500KV CKT 1	
20L	16ALL	0	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	398.7	0.06848	101.8436	ROSEAU - ROSEAU 2 500.00 500KV CKT 1	
20L	16ALL	0	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	398.7	0.06848	101.643	FORBES - ROSEAU 500KV CKT 1	
17SP	16ALL	2	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	384.6	0.06738	134.6562	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z	
17SP	16ALL	2	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	384.6	0.06738	134.5002	G16035-TAPII345.00 - LELAND2-LNX3345.00 345KV CKT Z	
17SP	16ALL	2	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	394.9	0.06738	131.296	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z	
17SP	16ALL	2	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	394.9	0.06738	131.1694	G16035-TAPII345.00 - LELAND2-LNX3345.00 345KV CKT Z	
16WP	16ALL	2	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	392.8	0.06606	114.4897	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z	
16WP	16ALL	2	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	392.8	0.06606	114.4133	G16035-TAPII345.00 - LELAND2-LNX3345.00 345KV CKT Z	
16WP	16ALL	2	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	397.5	0.06606	113.2617	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z	
16WP	16ALL	2	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	397.5	0.06606	113.1862	G16035-TAPII345.00 - LELAND2-LNX3345.00 345KV CKT Z	
25SP	16ALL	2	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	387	0.06579	128.938	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z	
25SP	16ALL	2	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	387	0.06579	128.8346	G16035-TAPII345.00 - LELAND2-LNX3345.00 345KV CKT Z	
25SP	16ALL	2	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	395.5	0.06579	126.3186	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z	
25SP	16ALL	2	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	395.5	0.06579	126.1922	G16035-TAPII345.00 - LELAND2-LNX3345.00 345KV CKT Z	
20SP	16ALL	2	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	388.1	0.06538	126.2667	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z	
20SP	16ALL	2	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	388.1	0.06538	126.1636	G16035-TAPII345.00 - LELAND2-LNX3345.00 345KV CKT Z	
20SP	16ALL	2	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	395.8	0.06538	123.9366	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z	
20SP	16ALL	2	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	395.8	0.06538	123.8355	G16035-TAPII345.00 - LELAND2-LNX3345.00 345KV CKT Z	
17G	16ALL	2	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	388	0.06444	124.6795	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z	
17G	16ALL	2	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	388	0.06444	124.5764	G16035-TAPII345.00 - LELAND2-LNX3345.00 345KV CKT Z	
17G	16ALL	2	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	395.6	0.06444	122.4359	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z	
17G	16ALL	2	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	395.6	0.06444	122.3095	G16035-TAPII345.00 - LELAND2-LNX3345.00 345KV CKT Z	
20WP	16ALL	2	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	396.8	0.06313	102.8294	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z	
20WP	16ALL	2	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	396.8	0.06313	102.7791	G16035-TAPII345.00 - LELAND2-LNX3345.00 345KV CKT Z	
20WP	16ALL	2	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	399.1	0.06313	102.3371	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z	
20WP	16ALL	2	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	399.1	0.06313	102.2619	G16035-TAPII345.00 - LELAND2-LNX3345.00 345KV CKT Z	
20L	16ALL	2	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	396.1	0.05789	102.6098	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z	
20L	16ALL	2	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	396.1	0.05789	102.5341	G16035-TAPII345.00 - LELAND2-LNX3345.00 345KV CKT Z	
20L	16ALL	2	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	398.7	0.05789	102.0159	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z	
20L	16ALL	2	FROM->TO	G16_035	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	398.7	0.05789	101.9658	G16035-TAPII345.00 - LELAND2-LNX3345.00 345KV CKT Z	
20L	08ALL	0	FROM->TO	G16_010A	KILDARE4 - WHITE EAGLE 138KV CKT 1	219	0.08467	132.1544	HUNTERS7 345.00 - WOODRING 345KV CKT 1	

SEASON	GROUP	SCENARIO	DIRECTION	SOURCE	MONITORED ELEMENT	RATE		CONTINGENCY		CONTINGENCY
						(MVA)	TDF	LOADING %		
20L	08ALL	0	FROM->TO	G16_010A	KILDARE4 - WHITE EAGLE 138KV CKT 1	219	0.08467	115.2137	G16-072-TAP 345.00 - HUNTERS7 345.00 345KV CKT 1	
20L	08ALL	0	FROM->TO	G16_010A	KILDARE4 - WHITE EAGLE 138KV CKT 1	219	0.05324	101.422	P12:069:OKGE:3TERM6	
20L	08ALL	0	FROM->TO	G16_010A	KILDARE4 - WHITE EAGLE 138KV CKT 1	219	0.05324	101.833	CHEROKEE PL TAP - CHILOCCO 69KV CKT 1	
20L	08ALL	0	FROM->TO	G16_010A	KILDARE4 - WHITE EAGLE 138KV CKT 1	219	0.05324	100.6914	CHEROKEE PL TAP - CONBLKT2 69.000 69KV CKT 1	
20L	08ALL	0	FROM->TO	G16_010A	KILDARE4 - WHITE EAGLE 138KV CKT 1	219	0.05245	112.5431	RANCHRD7 345.00 - SOONER 345KV CKT 1	
20L	08ALL	0	FROM->TO	G16_010A	KILDARE4 - WHITE EAGLE 138KV CKT 1	219	0.04942	99.9856	RENFROW4 138.00 - RENFROW4 138.00 138KV CKT 1	
20L	08ALL	0	FROM->TO	G16_010A	KILDARE4 - WHITE EAGLE 138KV CKT 1	219	0.04938	103.6771	P13:069-138:WERE:ELPA_TX-1::	
20L	08ALL	0	FROM->TO	G16_010A	KILDARE4 - WHITE EAGLE 138KV CKT 1	219	0.04933	104.261	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	
20L	08ALL	0	FROM->TO	G16_010A	KILDARE4 - WHITE EAGLE 138KV CKT 1	219	0.04933	103.713	EL PASO - FARBER 138KV CKT 1	
20L	08ALL	0	FROM->TO	G16_010A	KILDARE4 - WHITE EAGLE 138KV CKT 1	219	0.04931	101.2186	CANEYRV7 345.00 - NEOSHO 345KV CKT 1	
20L	08ALL	0	FROM->TO	G16_010A	KILDARE4 - WHITE EAGLE 138KV CKT 1	219	0.04857	101.5499	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	
20L	08ALL	0	FROM->TO	G16_010A	KILDARE4 - WHITE EAGLE 138KV CKT 1	219	0.04857	100.0283	G16-012-TAP 345.00 - WAVERLY7 345.00 345KV CKT 1	
20L	08ALL	0	FROM->TO	G16_010A	KILDARE4 - WHITE EAGLE 138KV CKT 1	219	0.04711	105.6903	P12:345:AEPW-GRDA:T.NO.-7:CLEVLND7	
20L	08ALL	0	FROM->TO	G16_010A	KILDARE4 - WHITE EAGLE 138KV CKT 1	219	0.04003	106.1582	P12:138:WERE:CRSW-SUMN_138::	
20L	08ALL	0	FROM->TO	G16_010A	KILDARE4 - WHITE EAGLE 138KV CKT 1	219	0.04003	106.1582	CRESWELL - OXFORD 138KV CKT 1	
20L	08ALL	0	FROM->TO	G16_010A	KILDARE4 - WHITE EAGLE 138KV CKT 1	219	0.04003	105.8842	OXFORD - SUMNER 4 138KV CKT 1	
20L	08ALL	0	FROM->TO	G16_010A	KILDARE4 - WHITE EAGLE 138KV CKT 1	219	0.0335	100.117	CRESWELL - MIDLTNT4 138.00 138KV CKT 1	
20L	08ALL	0	FROM->TO	G16_010A	KILDARE4 - WHITE EAGLE 138KV CKT 1	219	0.03221	109.7262	G15-015T 138.00 - MDFRDT4 138.00 138KV CKT 1	
20L	08ALL	0	FROM->TO	G16_010A	KILDARE4 - WHITE EAGLE 138KV CKT 1	219	0.03221	106.7582	MDFRDT4 138.00 - RENFROW4 138.00 138KV CKT 1	
17G	08ALL	0	TO->FROM	G16_033	KINZE - MCELROY 138KV CKT 1	220.3	0.03822	103.8415	SOONER (SOONERS) 345/138/13.8KV TRANSFORMER CKT 1	
17SP	08ALL	0	TO->FROM	G16_033	KINZE - MCELROY 138KV CKT 1	221.3	0.03303	129.6951	SPVALLY4 138.00 - STILLWATER 138KV CKT 1	
17SP	08ALL	0	TO->FROM	G16_033	KINZE - MCELROY 138KV CKT 1	221.3	0.03303	128.2943	PAYNESB4 138.00 - SPVALLY4 138.00 138KV CKT 1	
17SP	08ALL	0	TO->FROM	G16_033	KINZE - MCELROY 138KV CKT 1	221.3	0.03303	127.2098	CUSHING - PAYNESB4 138.00 138KV CKT 1	
16WP	08ALL	0	TO->FROM	G16_033	KINZE - MCELROY 138KV CKT 1	268.9	0.03228	105.1843	SPVALLY4 138.00 - STILLWATER 138KV CKT 1	
16WP	08ALL	0	TO->FROM	G16_033	KINZE - MCELROY 138KV CKT 1	268.9	0.03228	104.4405	PAYNESB4 138.00 - SPVALLY4 138.00 138KV CKT 1	
16WP	08ALL	0	TO->FROM	G16_033	KINZE - MCELROY 138KV CKT 1	268.9	0.03228	103.8083	CUSHING - PAYNESB4 138.00 138KV CKT 1	
17G	08ALL	0	TO->FROM	G16_033	KINZE - MCELROY 138KV CKT 1	220.3	0.0319	123.5636	SPVALLY4 138.00 - STILLWATER 138KV CKT 1	
17G	08ALL	0	TO->FROM	G16_033	KINZE - MCELROY 138KV CKT 1	220.3	0.0319	122.7012	PAYNESB4 138.00 - SPVALLY4 138.00 138KV CKT 1	
17G	08ALL	0	TO->FROM	G16_033	KINZE - MCELROY 138KV CKT 1	220.3	0.0319	121.8841	CUSHING - PAYNESB4 138.00 138KV CKT 1	
17SP	08ALL	0	TO->FROM	G16_033	KINZE - MCELROY 138KV CKT 1	221.3	0.03178	110.6128	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	
17G	08ALL	0	TO->FROM	G16_033	KINZE - MCELROY 138KV CKT 1	220.3	0.03057	106.5417	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	
17SP	08ALL	0	TO->FROM	G16_033	KINZE - MCELROY 138KV CKT 1	221.3	0.03049	106.7009	COTTONWOOD CREEK - PINE ST 138KV CKT 1	
16WP	08ALL	0	FROM->TO	G16_033	KINZE - STILLWATER KINZIE 138KV CKT 1	286.9	0.05344	114.5129	CLEVELAND - G15066_T 345.00 345KV CKT 1	
16WP	08ALL	0	FROM->TO	G16_033	KINZE - STILLWATER KINZIE 138KV CKT 1	286.9	0.05344	105.5202	G15066_T 345.00 - SOONER 345KV CKT 1	
17G	08ALL	0	FROM->TO	G16_033	KINZE - STILLWATER KINZIE 138KV CKT 1	286.7	0.05283	111.357	CLEVELAND - G15066_T 345.00 345KV CKT 1	
17G	08ALL	0	FROM->TO	G16_033	KINZE - STILLWATER KINZIE 138KV CKT 1	286.7	0.05283	102.393	G15066_T 345.00 - SOONER 345KV CKT 1	
17SP	08ALL	0	FROM->TO	G16_033	KINZE - STILLWATER KINZIE 138KV CKT 1	287	0.05258	124.0518	CLEVELAND - G15066_T 345.00 345KV CKT 1	
17SP	08ALL	0	FROM->TO	G16_033	KINZE - STILLWATER KINZIE 138KV CKT 1	287	0.05258	115.0971	G15066_T 345.00 - SOONER 345KV CKT 1	
17SP	08ALL	0	FROM->TO	G16_033	KINZE - STILLWATER KINZIE 138KV CKT 1	287	0.04878	100.6037	SPVALLY4 138.00 - STILLWATER 138KV CKT 1	
17SP	08ALL	0	FROM->TO	G16_033	KINZE - STILLWATER KINZIE 138KV CKT 1	287	0.04042	100.6151	P13:138-345:GRDA:CLEVELAND_XFMR#1	
17SP	08ALL	0	FROM->TO	G16_033	KINZE - STILLWATER KINZIE 138KV CKT 1	287	0.04042	100.6151	CLEVELAND (CLVAUTO1) 345/138/13.8KV TRANSFORMER CKT 1	
17SP	08ALL	0	FROM->TO	G16_033	KINZE - STILLWATER KINZIE 138KV CKT 1	287	0.04042	100.6151	CLEVELAND - CLEVLND 4 138.00 138KV CKT Z1	
20SP	17ALL	0	FROM->TO	G16_006	MISSION - ST FRANCIS 115KV CKT 1	79.2	0.03849	142.3427	P12:115:UMZW:# 173 #: WI-WE-MS IN SD. WITTEN IS A TAP	
20SP	17ALL	0	FROM->TO	G16_006	MISSION - ST FRANCIS 115KV CKT 1	79.2	0.03834	141.5895	MISSION - WITTEN 115KV CKT 1	
20WP	17ALL	0	FROM->TO	G16_006	MISSION - ST FRANCIS 115KV CKT 1	78.8	0.03815	117.2823	P12:115:UMZW:# 173 #: WI-WE-MS IN SD. WITTEN IS A TAP	
25SP	17ALL	0	FROM->TO	G16_006	MISSION - ST FRANCIS 115KV CKT 1	79.4	0.03815	143.7084	P12:115:UMZW:# 173 #: WI-WE-MS IN SD. WITTEN IS A TAP	
20WP	17ALL	0	FROM->TO	G16_006	MISSION - ST FRANCIS 115KV CKT 1	78.8	0.038	116.6522	MISSION - WITTEN 115KV CKT 1	
25SP	17ALL	0	FROM->TO	G16_006	MISSION - ST FRANCIS 115KV CKT 1	79.4	0.038	143.083	MISSION - WITTEN 115KV CKT 1	
20L	17ALL	0	FROM->TO	G16_006	MISSION - ST FRANCIS 115KV CKT 1	79.3	0.03789	103.8154	P12:115:UMZW:# 173 #: WI-WE-MS IN SD. WITTEN IS A TAP	
20L	17ALL	0	FROM->TO	G16_006	MISSION - ST FRANCIS 115KV CKT 1	79.3	0.03773	103.5675	MISSION - WITTEN 115KV CKT 1	
17G	17ALL	0	FROM->TO	G16_006	MISSION - ST FRANCIS 115KV CKT 1	79.2	0.03682	113.8654	P12:115:UMZW:# 173 #: WI-WE-MS IN SD. WITTEN IS A TAP	
17G	17ALL	0	FROM->TO	G16_006	MISSION - ST FRANCIS 115KV CKT 1	79.2	0.03682	112.3502	P12:115:UMZW:# 172 #: WI IN SD.	
17G	17ALL	0	FROM->TO	G16_006	MISSION - ST FRANCIS 115KV CKT 1	79.2	0.03682	101.1128	P12:115:UMZW:# 150 #: GY-BO-FR IN SD. GY-BO-FR BONESTEEL HAS FAULT INTERRUPTING DEVICES (NOT BREAKERS)	
17G	17ALL	0	FROM->TO	G16_006	MISSION - ST FRANCIS 115KV CKT 1	79.2	0.03682	113.8654	MISSION - WITTEN 115KV CKT 1	
17G	17ALL	0	FROM->TO	G16_006	MISSION - ST FRANCIS 115KV CKT 1	79.2	0.03682	112.4765	WINNER - WITTEN 115KV CKT 1	

SEASON	GROUP	SCENARIO	DIRECTION	SOURCE	MONITORED ELEMENT	RATE		CONTINGENCY		CONTINGENCY
						(MVA)	TDF	LOADING %		
17G	17ALL	0	FROM->TO	G16_006	MISSION - ST FRANCIS 115KV CKT 1	79.2	0.03682	107.0472	GREGORY - WINNER 115KV CKT 1	
17G	17ALL	0	FROM->TO	G16_006	MISSION - ST FRANCIS 115KV CKT 1	79.2	0.03682	101.1128	BONESTEEL - GREGORY 115KV CKT 1	
17G	17ALL	0	FROM->TO	G16_006	MISSION - ST FRANCIS 115KV CKT 1	79.2	0.03682	100.3553	BONESTEEL - FT RANDAL 115KV CKT 1	
16WP	17ALL	0	FROM->TO	G16_006	MISSION - ST FRANCIS 115KV CKT 1	79	0.03664	120.7841	P12:115:UMZW:# 173 #: WI-WE-MS IN SD. WITTEN IS A TAP	
16WP	17ALL	0	FROM->TO	G16_006	MISSION - ST FRANCIS 115KV CKT 1	79	0.03664	118.8854	P12:115:UMZW:# 172 #: WI IN SD.	
16WP	17ALL	0	FROM->TO	G16_006	MISSION - ST FRANCIS 115KV CKT 1	79	0.03664	102.936	P12:115:UMZW:# 150 #: GY-BO-FR IN SD. GY-BO-FR BONESTEEL HAS FAULT INTERRUPTING DEVICES (NOT BREAKERS)	
16WP	17ALL	0	FROM->TO	G16_006	MISSION - ST FRANCIS 115KV CKT 1	79	0.03664	120.7841	MISSION - WITTEN 115KV CKT 1	
16WP	17ALL	0	FROM->TO	G16_006	MISSION - ST FRANCIS 115KV CKT 1	79	0.03664	119.0119	WINNER - WITTEN 115KV CKT 1	
16WP	17ALL	0	FROM->TO	G16_006	MISSION - ST FRANCIS 115KV CKT 1	79	0.03664	111.2904	GREGORY - WINNER 115KV CKT 1	
16WP	17ALL	0	FROM->TO	G16_006	MISSION - ST FRANCIS 115KV CKT 1	79	0.03664	102.936	BONESTEEL - GREGORY 115KV CKT 1	
16WP	17ALL	0	FROM->TO	G16_006	MISSION - ST FRANCIS 115KV CKT 1	79	0.03664	101.5436	BONESTEEL - FT RANDAL 115KV CKT 1	
17SP	17ALL	0	FROM->TO	G16_006	MISSION - ST FRANCIS 115KV CKT 1	79.7	0.0365	154.1195	P12:115:UMZW:# 173 #: WI-WE-MS IN SD. WITTEN IS A TAP	
17SP	17ALL	0	FROM->TO	G16_006	MISSION - ST FRANCIS 115KV CKT 1	79.7	0.0365	152.7393	P12:115:UMZW:# 172 #: WI IN SD.	
17SP	17ALL	0	FROM->TO	G16_006	MISSION - ST FRANCIS 115KV CKT 1	79.7	0.0365	140.6941	P12:115:UMZW:# 150 #: GY-BO-FR IN SD. GY-BO-FR BONESTEEL HAS FAULT INTERRUPTING DEVICES (NOT BREAKERS)	
17SP	17ALL	0	FROM->TO	G16_006	MISSION - ST FRANCIS 115KV CKT 1	79.7	0.0365	154.1195	MISSION - WITTEN 115KV CKT 1	
17SP	17ALL	0	FROM->TO	G16_006	MISSION - ST FRANCIS 115KV CKT 1	79.7	0.0365	152.8647	WINNER - WITTEN 115KV CKT 1	
17SP	17ALL	0	FROM->TO	G16_006	MISSION - ST FRANCIS 115KV CKT 1	79.7	0.0365	146.7167	GREGORY - WINNER 115KV CKT 1	
17SP	17ALL	0	FROM->TO	G16_006	MISSION - ST FRANCIS 115KV CKT 1	79.7	0.0365	140.6941	BONESTEEL - GREGORY 115KV CKT 1	
17SP	17ALL	0	FROM->TO	G16_006	MISSION - ST FRANCIS 115KV CKT 1	79.7	0.0365	139.6903	BONESTEEL - FT RANDAL 115KV CKT 1	
25SP	17ALL	0	FROM->TO	G16_006	MISSION - ST FRANCIS 115KV CKT 1	79.4	0.03006	120.5291	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	
25SP	17ALL	0	FROM->TO	G16_006	MISSION - ST FRANCIS 115KV CKT 1	79.4	0.03006	120.5291	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	
20SP	17ALL	0	FROM->TO	G16_006	MISSION - ST FRANCIS 115KV CKT 1	79.2	0.03005	117.3853	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	
20SP	17ALL	0	FROM->TO	G16_006	MISSION - ST FRANCIS 115KV CKT 1	79.2	0.03005	117.3853	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	
20SP	17ALL	0	FROM->TO	G16_006	MISSION - WITTEN 115KV CKT 1	119.9	0.04715	102.722	P12:115:NPPD:1091:VALENTN7:MISSION7:BTB	
20SP	17ALL	0	FROM->TO	G16_006	MISSION - WITTEN 115KV CKT 1	119.9	0.04715	102.722	MISSION - ST FRANCIS 115KV CKT 1	
20L	17ALL	0	FROM->TO	G16_006	MISSION - WITTEN 115KV CKT 1	119.9	0.04655	101.7158	P12:115:NPPD:1091:VALENTN7:MISSION7:BTB	
20L	17ALL	0	FROM->TO	G16_006	MISSION - WITTEN 115KV CKT 1	119.9	0.04655	101.7158	MISSION - ST FRANCIS 115KV CKT 1	
25SP	17ALL	0	FROM->TO	G16_006	MISSION - WITTEN 115KV CKT 1	119.9	0.04645	102.3915	P12:115:NPPD:1091:VALENTN7:MISSION7:BTB	
25SP	17ALL	0	FROM->TO	G16_006	MISSION - WITTEN 115KV CKT 1	119.9	0.04645	102.3915	MISSION - ST FRANCIS 115KV CKT 1	
25SP	08ALL	0	FROM->TO	G16_033	MORISNT4 138.00 - STILLWATER 138KV CKT 1	477.9	0.05968	104.0081	CLEVELAND - G15066_T 345.00 345KV CKT 1	
20SP	08ALL	0	FROM->TO	G16_033	MORISNT4 138.00 - STILLWATER 138KV CKT 1	477.9	0.0591	109.5879	CLEVELAND - G15066_T 345.00 345KV CKT 1	
20SP	08ALL	0	FROM->TO	G16_033	MORISNT4 138.00 - STILLWATER 138KV CKT 1	477.9	0.0591	104.1056	G15066_T 345.00 - SOONER 345KV CKT 1	
20WP	08ALL	0	FROM->TO	G16_033	MORISNT4 138.00 - STILLWATER 138KV CKT 1	478	0.05787	108.578	CLEVELAND - G15066_T 345.00 345KV CKT 1	
20WP	08ALL	0	FROM->TO	G16_033	MORISNT4 138.00 - STILLWATER 138KV CKT 1	478	0.05787	103.076	G15066_T 345.00 - SOONER 345KV CKT 1	
17SP	08ALL	0	FROM->TO	G16_033	MORISNT4 138.00 - STILLWATER 138KV CKT 1	477.8	0.05487	105.1385	CLEVELAND - G15066_T 345.00 345KV CKT 1	
20L	08ALL	0	FROM->TO	G16_033	MORISNT4 138.00 - STILLWATER 138KV CKT 1	477.5	0.04004	102.4884	CLEVELAND - G15066_T 345.00 345KV CKT 1	
25SP	08ALL	0	FROM->TO	G16_010A	MORISNT4 138.00 - STILLWATER 138KV CKT 1	477.9	0.03256	104.0081	CLEVELAND - G15066_T 345.00 345KV CKT 1	
20SP	08ALL	0	FROM->TO	G16_010A	MORISNT4 138.00 - STILLWATER 138KV CKT 1	477.9	0.03199	109.5879	CLEVELAND - G15066_T 345.00 345KV CKT 1	
20SP	08ALL	0	FROM->TO	G16_010A	MORISNT4 138.00 - STILLWATER 138KV CKT 1	477.9	0.03199	104.1056	G15066_T 345.00 - SOONER 345KV CKT 1	
20WP	08ALL	0	FROM->TO	G16_010A	MORISNT4 138.00 - STILLWATER 138KV CKT 1	478	0.03075	108.578	CLEVELAND - G15066_T 345.00 345KV CKT 1	
20WP	08ALL	0	FROM->TO	G16_010A	MORISNT4 138.00 - STILLWATER 138KV CKT 1	478	0.03075	103.076	G15066_T 345.00 - SOONER 345KV CKT 1	
17SP	08ALL	0	FROM->TO	G16_010A	MORISNT4 138.00 - STILLWATER 138KV CKT 1	477.8	0.03066	105.1385	CLEVELAND - G15066_T 345.00 345KV CKT 1	
16WP	03ALL	0	TO->FROM	G16_010B	MULLERGREN - SPEARVILLE 230KV CKT 1	391.4	0.03076	124.1191	DBL-G1524-WICH	
16WP	03ALL	0	TO->FROM	G16_010B	MULLERGREN - SPEARVILLE 230KV CKT 1	391.4	0.03076	109.4793	DBL-THIS-G1524	
17G	03ALL	0	TO->FROM	G16_010B	MULLERGREN - SPEARVILLE 230KV CKT 1	393.2	0.03002	125.326	DBL-G1524-WICH	
17G	03ALL	0	TO->FROM	G16_010B	MULLERGREN - SPEARVILLE 230KV CKT 1	393.2	0.03002	110.7787	DBL-THIS-G1524	
17SP	09ALL_1	3	FROM->TO	G16_026A	NORTH PLATTE - STOCKVILLE 115KV CKT 1	136.9	0.05962	105.4176	GERALD GENTLEMAN STATION - RED WILLOW 345KV CKT 1	
17SP	09ALL_1	0	FROM->TO	G16_026A	NORTH PLATTE - STOCKVILLE 115KV CKT 1	136.9	0.05934	106.3289	GERALD GENTLEMAN STATION - RED WILLOW 345KV CKT 1	
17SP	09ALL_1	2	FROM->TO	G16_026A	NORTH PLATTE - STOCKVILLE 115KV CKT 1	136.9	0.05678	105.1778	GERALD GENTLEMAN STATION - RED WILLOW 345KV CKT 1	
20SP	09ALL_1	3	FROM->TO	G16_026A	NORTH PLATTE - STOCKVILLE 115KV CKT 1	136.9	0.0551	102.3589	GERALD GENTLEMAN STATION - RED WILLOW 345KV CKT 1	
25SP	09ALL_1	3	FROM->TO	G16_026A	NORTH PLATTE - STOCKVILLE 115KV CKT 1	136.8	0.0549	117.4065	GERALD GENTLEMAN STATION - RED WILLOW 345KV CKT 1	
20SP	09ALL	0	FROM->TO	G16_026A	NORTH PLATTE - STOCKVILLE 115KV CKT 1	136.9	0.05306	102.2118	GERALD GENTLEMAN STATION - RED WILLOW 345KV CKT 1	
25SP	09ALL	0	FROM->TO	G16_026A	NORTH PLATTE - STOCKVILLE 115KV CKT 1	136.8	0.05286	117.3324	GERALD GENTLEMAN STATION - RED WILLOW 345KV CKT 1	
17SP	09ALL	0	FROM->TO	G16_026B	NORTH PLATTE - STOCKVILLE 115KV CKT 1	136.9	0.04872	105.1008	GERALD GENTLEMAN STATION - RED WILLOW 345KV CKT 1	
17SP	09ALL_2	3	FROM->TO	G16_026B	NORTH PLATTE - STOCKVILLE 115KV CKT 1	136.9	0.0471	103.981	GERALD GENTLEMAN STATION - RED WILLOW 345KV CKT 1	

SEASON	GROUP	SCENARIO	DIRECTION	SOURCE	MONITORED ELEMENT	RATE		CONTINGENCY		CONTINGENCY
						(MVA)	TDF	LOADING %		
17SP	09ALL_2	2	FROM->TO	G16_026B	NORTH PLATTE - STOCKVILLE 115KV CKT 1	136.9	0.0454	103.8571	GERALD GENTLEMAN STATION - RED WILLOW 345KV CKT 1	
20SP	09ALL_2	3	FROM->TO	G16_026B	NORTH PLATTE - STOCKVILLE 115KV CKT 1	136.9	0.04403	101.0845	GERALD GENTLEMAN STATION - RED WILLOW 345KV CKT 1	
25SP	09ALL_2	3	FROM->TO	G16_026B	NORTH PLATTE - STOCKVILLE 115KV CKT 1	136.8	0.04383	116.1312	GERALD GENTLEMAN STATION - RED WILLOW 345KV CKT 1	
20SP	09ALL	0	FROM->TO	G16_026B	NORTH PLATTE - STOCKVILLE 115KV CKT 1	136.9	0.04281	101.0301	GERALD GENTLEMAN STATION - RED WILLOW 345KV CKT 1	
25SP	09ALL	0	FROM->TO	G16_026B	NORTH PLATTE - STOCKVILLE 115KV CKT 1	136.8	0.04261	116.1499	GERALD GENTLEMAN STATION - RED WILLOW 345KV CKT 1	
17SP	08ALL	0	TO->FROM	G16_010A	NORTHWEST - SPRING CREEK 345KV CKT 1	1195	0.10065	105.2744	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	
25SP	08ALL	0	TO->FROM	G16_010A	NORTHWEST - SPRING CREEK 345KV CKT 1	1195	0.09202	111.3914	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	
25SP	08ALL	0	TO->FROM	G16_010A	NORTHWEST - SPRING CREEK 345KV CKT 1	1195	0.09202	103.2576	G15063_T 345.00 - WOODRING 345KV CKT 1	
17SP	08ALL	0	TO->FROM	G16_033	NORTHWEST - SPRING CREEK 345KV CKT 1	1195	0.08987	105.2744	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	
25SP	08ALL	0	TO->FROM	G16_033	NORTHWEST - SPRING CREEK 345KV CKT 1	1195	0.0872	111.3914	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	
25SP	08ALL	0	TO->FROM	G16_033	NORTHWEST - SPRING CREEK 345KV CKT 1	1195	0.0872	103.2576	G15063_T 345.00 - WOODRING 345KV CKT 1	
17SP	16ALL	2	TO->FROM	G16_035	OAHE - SULLEY BUTTE 230KV CKT 1	255.9	0.18292	103.9545	G16-017-TAP 345.00 - G16035-TAPII345.00 345KV CKT 1	
17SP	16ALL	2	TO->FROM	G16_035	OAHE - SULLEY BUTTE 230KV CKT 1	255.9	0.18292	103.8373	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1	
17SP	16ALL	2	TO->FROM	G16_035	OAHE - SULLEY BUTTE 230KV CKT 1	255.9	0.18292	103.8373	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z	
17G	16ALL	2	TO->FROM	G16_035	OAHE - SULLEY BUTTE 230KV CKT 1	254.8	0.18123	107.4596	G16-017-TAP 345.00 - G16035-TAPII345.00 345KV CKT 1	
17G	16ALL	2	TO->FROM	G16_035	OAHE - SULLEY BUTTE 230KV CKT 1	254.8	0.18123	107.3811	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z	
17G	16ALL	2	TO->FROM	G16_035	OAHE - SULLEY BUTTE 230KV CKT 1	254.8	0.18123	107.3811	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1	
20L	16ALL	2	TO->FROM	G16_035	OAHE - SULLEY BUTTE 230KV CKT 1	253.9	0.17789	102.4875	G16-017-TAP 345.00 - G16035-TAPII345.00 345KV CKT 1	
20L	16ALL	2	TO->FROM	G16_035	OAHE - SULLEY BUTTE 230KV CKT 1	253.9	0.17789	102.4088	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z	
20L	16ALL	2	TO->FROM	G16_035	OAHE - SULLEY BUTTE 230KV CKT 1	253.9	0.17789	102.4088	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1	
17SP	17ALL	0	TO->FROM	G16_006	OGALLALA - SIDNEY 230KV CKT 1	319.9	0.11314	102.101	KEYSTONE - SIDNEY1-LNX3345.00 345KV CKT 1	
17SP	17ALL	0	TO->FROM	G16_006	OGALLALA - SIDNEY 230KV CKT 1	319.9	0.11314	102.101	SIDNEY - SIDNEY1-LNX3345.00 345KV CKT Z	
17G	17ALL	0	TO->FROM	G16_006	OGALLALA - SIDNEY 230KV CKT 1	319.8	0.10793	104.9839	KEYSTONE - SIDNEY1-LNX3345.00 345KV CKT 1	
17G	17ALL	0	TO->FROM	G16_006	OGALLALA - SIDNEY 230KV CKT 1	319.8	0.10793	104.9839	SIDNEY - SIDNEY1-LNX3345.00 345KV CKT Z	
17SP	16ALL	0	TO->FROM	G16_035	OGALLALA - SIDNEY 230KV CKT 1	319.8	0.03023	129.3655	KEYSTONE - SIDNEY1-LNX3345.00 345KV CKT 1	
17SP	16ALL	0	TO->FROM	G16_035	OGALLALA - SIDNEY 230KV CKT 1	319.8	0.03023	129.3655	SIDNEY - SIDNEY1-LNX3345.00 345KV CKT Z	
16WP	08ALL	0	FROM->TO	G16_033	OSAGE - WEBB CITY TAP 138KV CKT 1	190.4	0.04471	114.3353	CLEVELAND - G15066_T 345.00 345KV CKT 1	
16WP	08ALL	0	FROM->TO	G16_033	OSAGE - WEBB CITY TAP 138KV CKT 1	190.4	0.04471	104.3563	G15066_T 345.00 - SOONER 345KV CKT 1	
17G	08ALL	0	FROM->TO	G16_033	OSAGE - WEBB CITY TAP 138KV CKT 1	179.1	0.04432	120.6949	CLEVELAND - G15066_T 345.00 345KV CKT 1	
17G	08ALL	0	FROM->TO	G16_033	OSAGE - WEBB CITY TAP 138KV CKT 1	179.1	0.04432	110.0863	G15066_T 345.00 - SOONER 345KV CKT 1	
17SP	08ALL	0	FROM->TO	G16_033	OSAGE - WEBB CITY TAP 138KV CKT 1	179.4	0.04406	126.1608	CLEVELAND - G15066_T 345.00 345KV CKT 1	
17SP	08ALL	0	FROM->TO	G16_033	OSAGE - WEBB CITY TAP 138KV CKT 1	179.4	0.04406	115.6257	G15066_T 345.00 - SOONER 345KV CKT 1	
25SP	08ALL	0	FROM->TO	G16_033	OSAGE - WEBB CITY TAP 138KV CKT 1	179.8	0.04353	106.9914	CLEVELAND - G15066_T 345.00 345KV CKT 1	
20WP	08ALL	0	FROM->TO	G16_033	OSAGE - WEBB CITY TAP 138KV CKT 1	190.5	0.04326	114.4336	CLEVELAND - G15066_T 345.00 345KV CKT 1	
20WP	08ALL	0	FROM->TO	G16_033	OSAGE - WEBB CITY TAP 138KV CKT 1	190.5	0.04326	104.5648	G15066_T 345.00 - SOONER 345KV CKT 1	
20SP	08ALL	0	FROM->TO	G16_033	OSAGE - WEBB CITY TAP 138KV CKT 1	179.5	0.04309	123.2503	CLEVELAND - G15066_T 345.00 345KV CKT 1	
20SP	08ALL	0	FROM->TO	G16_033	OSAGE - WEBB CITY TAP 138KV CKT 1	179.5	0.04309	112.7767	G15066_T 345.00 - SOONER 345KV CKT 1	
17SP	08ALL	0	FROM->TO	G16_033	OSAGE - WEBB CITY TAP 138KV CKT 1	179.4	0.03972	102.3438	MORISNT4 138.00 - STILLWATER 138KV CKT 1	
20SP	08ALL	0	FROM->TO	G16_033	OSAGE - WEBB CITY TAP 138KV CKT 1	179.5	0.03937	100.095	MORISNT4 138.00 - STILLWATER 138KV CKT 1	
17SP	08ALL	0	FROM->TO	G16_033	OSAGE - WEBB CITY TAP 138KV CKT 1	179.4	0.0392	102.5869	P12:138:OKGE:3TERM2	
20SP	08ALL	0	FROM->TO	G16_033	OSAGE - WEBB CITY TAP 138KV CKT 1	179.5	0.03886	100.3937	P12:138:OKGE:3TERM2	
17G	08ALL	0	FROM->TO	G16_033	OSAGE - WEBB CITY TAP 138KV CKT 1	179.1	0.03496	100.3419	CLEVELAND - G15066_T 345.00 345KV CKT 1	
17G	08ALL	0	FROM->TO	G16_033	OSAGE - WEBB CITY TAP 138KV CKT 1	179.1	0.03496	100.0627	P12:138:GRDA:REMINGTON-OSAGEWIND	
17G	08ALL	0	FROM->TO	G16_033	OSAGE - WEBB CITY TAP 138KV CKT 1	179.1	0.03496	100.0627	40SAGEWIND 138.00 138/34.5KV TRANSFORMER CKT 1	
17SP	08ALL	0	FROM->TO	G16_033	OSAGE - WEBB CITY TAP 138KV CKT 1	179.4	0.0349	105.7767	G15066_T 345.00 - SOONER 345KV CKT 1	
17SP	08ALL	0	FROM->TO	G16_033	OSAGE - WEBB CITY TAP 138KV CKT 1	179.4	0.0349	105.3865	P12:138:GRDA:REMINGTON-OSAGEWIND	
17SP	08ALL	0	FROM->TO	G16_033	OSAGE - WEBB CITY TAP 138KV CKT 1	179.4	0.0349	105.3865	40SAGEWIND 138.00 138/34.5KV TRANSFORMER CKT 1	
20SP	08ALL	0	FROM->TO	G16_033	OSAGE - WEBB CITY TAP 138KV CKT 1	179.5	0.03431	103.5828	P12:138:GRDA:REMINGTON-FAIRFAX	
20SP	08ALL	0	FROM->TO	G16_033	OSAGE - WEBB CITY TAP 138KV CKT 1	179.5	0.03431	103.2486	40SAGEWIND 138.00 138/34.5KV TRANSFORMER CKT 1	
20L	08ALL	0	FROM->TO	G16_033	OSAGE - WEBB CITY TAP 138KV CKT 1	178.1	0.03315	132.4997	CLEVELAND - G15066_T 345.00 345KV CKT 1	
20L	08ALL	0	FROM->TO	G16_033	OSAGE - WEBB CITY TAP 138KV CKT 1	178.1	0.03315	122.0561	G15066_T 345.00 - SOONER 345KV CKT 1	
20L	08ALL	0	FROM->TO	G16_033	OSAGE - WEBB CITY TAP 138KV CKT 1	178.1	0.03074	100.3964	MORISNT4 138.00 - STILLWATER 138KV CKT 1	
20L	08ALL	0	FROM->TO	G16_033	OSAGE - WEBB CITY TAP 138KV CKT 1	178.1	0.03018	100.5254	P12:138:OKGE:3TERM2	
25SP	09ALL_1	3	FROM->TO	G16_026A	POTTER COUNTY INTERCHANGE (WAUK 90343-A) 345/230/13.2KV TRANSFORMER CKT 1	544.1	0.03622	128.2625	P12:230:SPS:K75.1.HITCH.MOORE	
25SP	09ALL_1	3	FROM->TO	G16_026A	POTTER COUNTY INTERCHANGE (WAUK 90343-A) 345/230/13.2KV TRANSFORMER CKT 1	556.5	0.03622	125.6022	P12:230:SPS:K75.1.HITCH.MOORE	

SEASON	GROUP	SCENARIO	DIRECTION	SOURCE	MONITORED ELEMENT	RATE		CONTINGENCY		CONTINGENCY
						(MVA)	TDF	LOADING %		
25SP	00_1	0	FROM->TO	G16_026A	POTTER COUNTY INTERCHANGE (WAUK 90343-A) 345/230/13.2KV TRANSFORMER CKT 1	555.2	0.03606	101.1758	P12:345:SPS:J11.1.TUCO.BORDER	
25SP	00_1	0	FROM->TO	G16_026A	POTTER COUNTY INTERCHANGE (WAUK 90343-A) 345/230/13.2KV TRANSFORMER CKT 1	559.2	0.03606	100.5772	P12:345:SPS:J11.1.TUCO.BORDER	
25SP	00_1	2	FROM->TO	G16_026A	POTTER COUNTY INTERCHANGE (WAUK 90343-A) 345/230/13.2KV TRANSFORMER CKT 1	555.2	0.03606	101.1758	P12:345:SPS:J11.1.TUCO.BORDER	
25SP	00_1	2	FROM->TO	G16_026A	POTTER COUNTY INTERCHANGE (WAUK 90343-A) 345/230/13.2KV TRANSFORMER CKT 1	559.2	0.03606	100.5772	P12:345:SPS:J11.1.TUCO.BORDER	
25SP	00_2	0	FROM->TO	G16_026A	POTTER COUNTY INTERCHANGE (WAUK 90343-A) 345/230/13.2KV TRANSFORMER CKT 1	555.2	0.03606	100.6508	P12:345:SPS:J11.1.TUCO.BORDER	
25SP	00_2	0	FROM->TO	G16_026A	POTTER COUNTY INTERCHANGE (WAUK 90343-A) 345/230/13.2KV TRANSFORMER CKT 1	559.2	0.03606	100.056	P12:345:SPS:J11.1.TUCO.BORDER	
25SP	00_2	2	FROM->TO	G16_026A	POTTER COUNTY INTERCHANGE (WAUK 90343-A) 345/230/13.2KV TRANSFORMER CKT 1	555.2	0.03606	100.6508	P12:345:SPS:J11.1.TUCO.BORDER	
25SP	00_2	2	FROM->TO	G16_026A	POTTER COUNTY INTERCHANGE (WAUK 90343-A) 345/230/13.2KV TRANSFORMER CKT 1	559.2	0.03606	100.056	P12:345:SPS:J11.1.TUCO.BORDER	
25SP	09ALL	0	FROM->TO	G16_026A	POTTER COUNTY INTERCHANGE (WAUK 90343-A) 345/230/13.2KV TRANSFORMER CKT 1	544.1	0.03593	128.2751	P12:230:SPS:K75.1.HITCH.MOORE	
25SP	09ALL	0	FROM->TO	G16_026A	POTTER COUNTY INTERCHANGE (WAUK 90343-A) 345/230/13.2KV TRANSFORMER CKT 1	556.5	0.03593	125.5965	P12:230:SPS:K75.1.HITCH.MOORE	
25SP	09ALL_1	3	FROM->TO	G16_026A	POTTER COUNTY INTERCHANGE (WAUK 90343-A) 345/230/13.2KV TRANSFORMER CKT 1	544.1	0.0356	131.5279	P12:345:SPS:J11.1.TUCO.BORDER	
25SP	09ALL_1	3	FROM->TO	G16_026A	POTTER COUNTY INTERCHANGE (WAUK 90343-A) 345/230/13.2KV TRANSFORMER CKT 1	556.5	0.0356	128.7769	P12:345:SPS:J11.1.TUCO.BORDER	
25SP	09ALL_1	3	FROM->TO	G16_026A	POTTER COUNTY INTERCHANGE (WAUK 90343-A) 345/230/13.2KV TRANSFORMER CKT 1	544.1	0.0356	128.8446	BORDER 7345.00 - WOODWARD DISTRICT EHV 345KV CKT 1	
25SP	09ALL_1	3	FROM->TO	G16_026A	POTTER COUNTY INTERCHANGE (WAUK 90343-A) 345/230/13.2KV TRANSFORMER CKT 1	556.5	0.0356	126.1533	BORDER 7345.00 - WOODWARD DISTRICT EHV 345KV CKT 1	
25SP	09ALL	0	FROM->TO	G16_026A	POTTER COUNTY INTERCHANGE (WAUK 90343-A) 345/230/13.2KV TRANSFORMER CKT 1	544.1	0.03536	131.5221	P12:345:SPS:J11.1.TUCO.BORDER	
25SP	09ALL	0	FROM->TO	G16_026A	POTTER COUNTY INTERCHANGE (WAUK 90343-A) 345/230/13.2KV TRANSFORMER CKT 1	556.5	0.03536	128.7712	P12:345:SPS:J11.1.TUCO.BORDER	
25SP	09ALL	0	FROM->TO	G16_026A	POTTER COUNTY INTERCHANGE (WAUK 90343-A) 345/230/13.2KV TRANSFORMER CKT 1	544.1	0.03536	128.8388	BORDER 7345.00 - WOODWARD DISTRICT EHV 345KV CKT 1	
25SP	09ALL	0	FROM->TO	G16_026A	POTTER COUNTY INTERCHANGE (WAUK 90343-A) 345/230/13.2KV TRANSFORMER CKT 1	556.5	0.03536	126.1477	BORDER 7345.00 - WOODWARD DISTRICT EHV 345KV CKT 1	
25SP	09ALL_2	3	FROM->TO	G16_026B	POTTER COUNTY INTERCHANGE (WAUK 90343-A) 345/230/13.2KV TRANSFORMER CKT 1	544.1	0.03521	128.2334	P12:230:SPS:K75.1.HITCH.MOORE	
25SP	09ALL_2	3	FROM->TO	G16_026B	POTTER COUNTY INTERCHANGE (WAUK 90343-A) 345/230/13.2KV TRANSFORMER CKT 1	556.5	0.03521	125.5737	P12:230:SPS:K75.1.HITCH.MOORE	
25SP	09ALL	0	FROM->TO	G16_026B	POTTER COUNTY INTERCHANGE (WAUK 90343-A) 345/230/13.2KV TRANSFORMER CKT 1	544.1	0.03504	128.2488	P12:230:SPS:K75.1.HITCH.MOORE	
25SP	09ALL	0	FROM->TO	G16_026B	POTTER COUNTY INTERCHANGE (WAUK 90343-A) 345/230/13.2KV TRANSFORMER CKT 1	556.5	0.03504	125.5709	P12:230:SPS:K75.1.HITCH.MOORE	
25SP	09ALL_2	3	FROM->TO	G16_026B	POTTER COUNTY INTERCHANGE (WAUK 90343-A) 345/230/13.2KV TRANSFORMER CKT 1	544.1	0.03474	131.5046	P12:345:SPS:J11.1.TUCO.BORDER	
25SP	09ALL_2	3	FROM->TO	G16_026B	POTTER COUNTY INTERCHANGE (WAUK 90343-A) 345/230/13.2KV TRANSFORMER CKT 1	556.5	0.03474	128.7541	P12:345:SPS:J11.1.TUCO.BORDER	
25SP	09ALL_2	3	FROM->TO	G16_026B	POTTER COUNTY INTERCHANGE (WAUK 90343-A) 345/230/13.2KV TRANSFORMER CKT 1	544.1	0.03474	128.8213	BORDER 7345.00 - WOODWARD DISTRICT EHV 345KV CKT 1	
25SP	09ALL_2	3	FROM->TO	G16_026B	POTTER COUNTY INTERCHANGE (WAUK 90343-A) 345/230/13.2KV TRANSFORMER CKT 1	556.5	0.03474	126.1305	BORDER 7345.00 - WOODWARD DISTRICT EHV 345KV CKT 1	
25SP	09ALL	0	FROM->TO	G16_026B	POTTER COUNTY INTERCHANGE (WAUK 90343-A) 345/230/13.2KV TRANSFORMER CKT 1	544.1	0.0346	131.5017	P12:345:SPS:J11.1.TUCO.BORDER	
25SP	09ALL	0	FROM->TO	G16_026B	POTTER COUNTY INTERCHANGE (WAUK 90343-A) 345/230/13.2KV TRANSFORMER CKT 1	556.5	0.0346	128.7512	P12:345:SPS:J11.1.TUCO.BORDER	
25SP	09ALL	0	FROM->TO	G16_026B	POTTER COUNTY INTERCHANGE (WAUK 90343-A) 345/230/13.2KV TRANSFORMER CKT 1	544.1	0.0346	128.8184	BORDER 7345.00 - WOODWARD DISTRICT EHV 345KV CKT 1	
25SP	09ALL	0	FROM->TO	G16_026B	POTTER COUNTY INTERCHANGE (WAUK 90343-A) 345/230/13.2KV TRANSFORMER CKT 1	556.5	0.0346	126.1277	BORDER 7345.00 - WOODWARD DISTRICT EHV 345KV CKT 1	
25SP	03ALL	0	FROM->TO	G16_010B	POTTER COUNTY INTERCHANGE (WAUK 90343-A) 345/230/13.2KV TRANSFORMER CKT 1	519.6	0.03355	145.2755	P12:345:SPS:J11.1.TUCO.BORDER	
25SP	03ALL	0	FROM->TO	G16_010B	POTTER COUNTY INTERCHANGE (WAUK 90343-A) 345/230/13.2KV TRANSFORMER CKT 1	547	0.03355	138.2361	P12:345:SPS:J11.1.TUCO.BORDER	
25SP	03ALL	0	FROM->TO	G16_010B	POTTER COUNTY INTERCHANGE (WAUK 90343-A) 345/230/13.2KV TRANSFORMER CKT 1	519.6	0.03355	142.5041	BORDER 7345.00 - WOODWARD DISTRICT EHV 345KV CKT 1	
25SP	03ALL	0	FROM->TO	G16_010B	POTTER COUNTY INTERCHANGE (WAUK 90343-A) 345/230/13.2KV TRANSFORMER CKT 1	547	0.03355	135.6035	BORDER 7345.00 - WOODWARD DISTRICT EHV 345KV CKT 1	
25SP	03ALL	3	FROM->TO	G16_010B	POTTER COUNTY INTERCHANGE (WAUK 90343-A) 345/230/13.2KV TRANSFORMER CKT 1	519.7	0.033	145.2096	P12:345:SPS:J11.1.TUCO.BORDER	
25SP	03ALL	3	FROM->TO	G16_010B	POTTER COUNTY INTERCHANGE (WAUK 90343-A) 345/230/13.2KV TRANSFORMER CKT 1	547	0.033	138.2	P12:345:SPS:J11.1.TUCO.BORDER	
25SP	03ALL	3	FROM->TO	G16_010B	POTTER COUNTY INTERCHANGE (WAUK 90343-A) 345/230/13.2KV TRANSFORMER CKT 1	519.7	0.033	142.4387	BORDER 7345.00 - WOODWARD DISTRICT EHV 345KV CKT 1	
25SP	03ALL	3	FROM->TO	G16_010B	POTTER COUNTY INTERCHANGE (WAUK 90343-A) 345/230/13.2KV TRANSFORMER CKT 1	547	0.033	135.5675	BORDER 7345.00 - WOODWARD DISTRICT EHV 345KV CKT 1	
25SP	03ALL	4	FROM->TO	G16_010B	POTTER COUNTY INTERCHANGE (WAUK 90343-A) 345/230/13.2KV TRANSFORMER CKT 1	519.7	0.03207	145.1374	P12:345:SPS:J11.1.TUCO.BORDER	
25SP	03ALL	4	FROM->TO	G16_010B	POTTER COUNTY INTERCHANGE (WAUK 90343-A) 345/230/13.2KV TRANSFORMER CKT 1	547.1	0.03207	138.1062	P12:345:SPS:J11.1.TUCO.BORDER	
25SP	03ALL	4	FROM->TO	G16_010B	POTTER COUNTY INTERCHANGE (WAUK 90343-A) 345/230/13.2KV TRANSFORMER CKT 1	519.7	0.03207	142.3666	BORDER 7345.00 - WOODWARD DISTRICT EHV 345KV CKT 1	
25SP	03ALL	4	FROM->TO	G16_010B	POTTER COUNTY INTERCHANGE (WAUK 90343-A) 345/230/13.2KV TRANSFORMER CKT 1	547.1	0.03207	135.4742	BORDER 7345.00 - WOODWARD DISTRICT EHV 345KV CKT 1	
25SP	17ALL	0	FROM->TO	G16_006	POTTER COUNTY INTERCHANGE (WAUK 90343-A) 345/230/13.2KV TRANSFORMER CKT 1	553.7	0.03102	104.5518	P12:345:SPS:J11.1.TUCO.BORDER	
25SP	17ALL	0	FROM->TO	G16_006	POTTER COUNTY INTERCHANGE (WAUK 90343-A) 345/230/13.2KV TRANSFORMER CKT 1	558.9	0.03102	103.7221	P12:345:SPS:J11.1.TUCO.BORDER	
25SP	17ALL	0	FROM->TO	G16_006	POTTER COUNTY INTERCHANGE (WAUK 90343-A) 345/230/13.2KV TRANSFORMER CKT 1	553.7	0.03102	101.8608	BORDER 7345.00 - WOODWARD DISTRICT EHV 345KV CKT 1	
25SP	17ALL	0	FROM->TO	G16_006	POTTER COUNTY INTERCHANGE (WAUK 90343-A) 345/230/13.2KV TRANSFORMER CKT 1	558.9	0.03102	101.0383	BORDER 7345.00 - WOODWARD DISTRICT EHV 345KV CKT 1	
25SP	00_1	0	FROM->TO	G16_026A	POTTER COUNTY INTERCHANGE (WAUK 90343-A) 345/230/13.2KV TRANSFORMER CKT 1	555.2	0.03093	100.5677	G14-074T 345.00 - TUCO INTERCHANGE 345KV CKT 1	
25SP	00_1	2	FROM->TO	G16_026A	POTTER COUNTY INTERCHANGE (WAUK 90343-A) 345/230/13.2KV TRANSFORMER CKT 1	555.2	0.03093	100.5677	G14-074T 345.00 - TUCO INTERCHANGE 345KV CKT 1	
25SP	00_2	0	FROM->TO	G16_026A	POTTER COUNTY INTERCHANGE (WAUK 90343-A) 345/230/13.2KV TRANSFORMER CKT 1	555.2	0.03093	100.8572	G14-074T 345.00 - TUCO INTERCHANGE 345KV CKT 1	
25SP	00_2	0	FROM->TO	G16_026A	POTTER COUNTY INTERCHANGE (WAUK 90343-A) 345/230/13.2KV TRANSFORMER CKT 1	559.2	0.03093	100.261	G14-074T 345.00 - TUCO INTERCHANGE 345KV CKT 1	
25SP	00_2	0	FROM->TO	G16_026A	POTTER COUNTY INTERCHANGE (WAUK 90343-A) 345/230/13.2KV TRANSFORMER CKT 1	555.2	0.03093	100.1007	G14-074T 345.00 - OKLAUNION 345KV CKT 1	
25SP	00_2	2	FROM->TO	G16_026A	POTTER COUNTY INTERCHANGE (WAUK 90343-A) 345/230/13.2KV TRANSFORMER CKT 1	555.2	0.03093	100.8572	G14-074T 345.00 - TUCO INTERCHANGE 345KV CKT 1	
25SP	00_2	2	FROM->TO	G16_026A	POTTER COUNTY INTERCHANGE (WAUK 90343-A) 345/230/13.2KV TRANSFORMER CKT 1	559.2	0.03093	100.261	G14-074T 345.00 - TUCO INTERCHANGE 345KV CKT 1	
25SP	00_2	2	FROM->TO	G16_026A	POTTER COUNTY INTERCHANGE (WAUK 90343-A) 345/230/13.2KV TRANSFORMER CKT 1	555.2	0.03093	100.1007	G14-074T 345.00 - OKLAUNION 345KV CKT 1	
25SP	09ALL_1	3	FROM->TO	G16_026A	POTTER COUNTY INTERCHANGE (WAUK 90343-A) 345/230/13.2KV TRANSFORMER CKT 1	544.1	0.03091	121.4259	P13:230-345:SPS:HITCHLAND.1	

SEASON	GROUP	SCENARIO	DIRECTION	SOURCE	MONITORED ELEMENT	RATE (MVA)	TDF	CONTINGENCY LOADING %	CONTINGENCY
25SP	09ALL_1		3 FROM->TO	G16_026A	POTTER COUNTY INTERCHANGE (WAUK 90343-A) 345/230/13.2KV TRANSFORMER CKT 1	544.1	0.03039	127.2701	G14-074T 345.00 - TUCO INTERCHANGE 345KV CKT 1
25SP	09ALL_1		3 FROM->TO	G16_026A	POTTER COUNTY INTERCHANGE (WAUK 90343-A) 345/230/13.2KV TRANSFORMER CKT 1	544.1	0.03039	126.6453	G14-074T 345.00 - OKLAUNION 345KV CKT 1
25SP	09ALL_1		3 FROM->TO	G16_026A	POTTER COUNTY INTERCHANGE (WAUK 90343-A) 345/230/13.2KV TRANSFORMER CKT 1	556.5	0.03039	124.614	G14-074T 345.00 - TUCO INTERCHANGE 345KV CKT 1
25SP	09ALL_1		3 FROM->TO	G16_026A	POTTER COUNTY INTERCHANGE (WAUK 90343-A) 345/230/13.2KV TRANSFORMER CKT 1	556.5	0.03039	124.021	G14-074T 345.00 - OKLAUNION 345KV CKT 1
25SP	09ALL		0 FROM->TO	G16_026A	POTTER COUNTY INTERCHANGE (WAUK 90343-A) 345/230/13.2KV TRANSFORMER CKT 1	544.1	0.03019	127.2643	G14-074T 345.00 - TUCO INTERCHANGE 345KV CKT 1
25SP	09ALL		0 FROM->TO	G16_026A	POTTER COUNTY INTERCHANGE (WAUK 90343-A) 345/230/13.2KV TRANSFORMER CKT 1	544.1	0.03019	126.6578	G14-074T 345.00 - OKLAUNION 345KV CKT 1
25SP	09ALL		0 FROM->TO	G16_026A	POTTER COUNTY INTERCHANGE (WAUK 90343-A) 345/230/13.2KV TRANSFORMER CKT 1	556.5	0.03019	124.6083	G14-074T 345.00 - TUCO INTERCHANGE 345KV CKT 1
25SP	09ALL		0 FROM->TO	G16_026A	POTTER COUNTY INTERCHANGE (WAUK 90343-A) 345/230/13.2KV TRANSFORMER CKT 1	556.5	0.03019	124.0153	G14-074T 345.00 - OKLAUNION 345KV CKT 1
25SP	03ALL		3 FROM->TO	G16_010B	POTTER COUNTY INTERCHANGE (WAUK 90343-A) 345/230/13.2KV TRANSFORMER CKT 1	519.7	0.03007	141.8772	P12:230:SPS:K75.1.HITCH.MOORE
25SP	03ALL		3 FROM->TO	G16_010B	POTTER COUNTY INTERCHANGE (WAUK 90343-A) 345/230/13.2KV TRANSFORMER CKT 1	547	0.03007	135.034	P12:230:SPS:K75.1.HITCH.MOORE
25SP	09ALL_2		3 FROM->TO	G16_026B	POTTER COUNTY INTERCHANGE (WAUK 90343-A) 345/230/13.2KV TRANSFORMER CKT 1	544.1	0.03005	121.4025	P13:230-345:SPS:HITCHLAND.1
25SP	09ALL_2		3 FROM->TO	G16_026B	POTTER COUNTY INTERCHANGE (WAUK 90343-A) 345/230/13.2KV TRANSFORMER CKT 1	544.1	0.03005	121.3658	P13:230-345:SPS:HITCHLAND.1
25SP	09ALL_2		3 FROM->TO	G16_026B	POTTER COUNTY INTERCHANGE (WAUK 90343-A) 345/230/13.2KV TRANSFORMER CKT 1	544.1	0.03005	119.8771	P12:345:SPS:J11.1.TUCO.BORDER
25SP	09ALL_2		3 FROM->TO	G16_026B	POTTER COUNTY INTERCHANGE (WAUK 90343-A) 345/230/13.2KV TRANSFORMER CKT 1	544.1	0.03005	119.8771	P12:345:SPS:J11.1.TUCO.BORDER
25SP	09ALL_2		3 FROM->TO	G16_026B	POTTER COUNTY INTERCHANGE (WAUK 90343-A) 345/230/13.2KV TRANSFORMER CKT 1	544.1	0.03005	118.8951	Golden Spread REC - Mustang Interchange 230 kV Generation Bus - MUSTANG STATION 230KV CKT @1
25SP	09ALL_2		3 FROM->TO	G16_026B	POTTER COUNTY INTERCHANGE (WAUK 90343-A) 345/230/13.2KV TRANSFORMER CKT 1	556.5	0.03005	118.8412	Golden Spread REC - Mustang Interchange 230 kV Generation Bus - MUSTANG STATION 230KV CKT @1
25SP	09ALL_2		3 FROM->TO	G16_026B	POTTER COUNTY INTERCHANGE (WAUK 90343-A) 345/230/13.2KV TRANSFORMER CKT 1	556.5	0.03005	117.3857	Hitchland Interchange (SIEM 8743067) 345/230/13.2KV TRANSFORMER CKT 2
25SP	09ALL_2		3 FROM->TO	G16_026B	POTTER COUNTY INTERCHANGE (WAUK 90343-A) 345/230/13.2KV TRANSFORMER CKT 1	556.5	0.03005	117.3857	Hitchland Interchange (SIEM 8743067) 345/230/13.2KV TRANSFORMER CKT 2
25SP	09ALL_2		3 FROM->TO	G16_026B	POTTER COUNTY INTERCHANGE (WAUK 90343-A) 345/230/13.2KV TRANSFORMER CKT 1	556.5	0.03005	117.3857	Hitchland Interchange (SIEM 8743067) 345/230/13.2KV TRANSFORMER CKT 2
25SP	09ALL_2		3 FROM->TO	G16_026B	POTTER COUNTY INTERCHANGE (WAUK 90343-A) 345/230/13.2KV TRANSFORMER CKT 1	544.1	0.03005	122.7734	TOLK STATION WEST 230/24.0KV TRANSFORMER CKT 1
25SP	09ALL_2		3 FROM->TO	G16_026B	POTTER COUNTY INTERCHANGE (WAUK 90343-A) 345/230/13.2KV TRANSFORMER CKT 1	544.1	0.03005	122.7212	TOLK STATION EAST 230/24.0KV TRANSFORMER CKT 1
25SP	09ALL_2		3 FROM->TO	G16_026B	POTTER COUNTY INTERCHANGE (WAUK 90343-A) 345/230/13.2KV TRANSFORMER CKT 1	544.1	0.03005	120.9443	Golden Spread REC - Mustang Interchange 230 kV Generation Bus - MUSTANG STATION 230KV CKT @1
25SP	09ALL_2		3 FROM->TO	G16_026B	POTTER COUNTY INTERCHANGE (WAUK 90343-A) 345/230/13.2KV TRANSFORMER CKT 1	556.5	0.03005	120.2175	TOLK STATION WEST 230/24.0KV TRANSFORMER CKT 1
25SP	09ALL_2		3 FROM->TO	G16_026B	POTTER COUNTY INTERCHANGE (WAUK 90343-A) 345/230/13.2KV TRANSFORMER CKT 1	556.5	0.03005	120.1844	TOLK STATION EAST 230/24.0KV TRANSFORMER CKT 1
25SP	09ALL_2		3 FROM->TO	G16_026B	POTTER COUNTY INTERCHANGE (WAUK 90343-A) 345/230/13.2KV TRANSFORMER CKT 1	544.1	0.03005	120.7854	Harrington Station East Bus 230/24.0KV TRANSFORMER CKT 1
25SP	09ALL_2		3 FROM->TO	G16_026B	POTTER COUNTY INTERCHANGE (WAUK 90343-A) 345/230/13.2KV TRANSFORMER CKT 1	544.1	0.03005	120.7854	HARRINGTON STATION 230/24.0KV TRANSFORMER CKT 1
25SP	09ALL_2		3 FROM->TO	G16_026B	POTTER COUNTY INTERCHANGE (WAUK 90343-A) 345/230/13.2KV TRANSFORMER CKT 1	544.1	0.03005	120.7671	Harrington Station Mid Bus 230/24.0KV TRANSFORMER CKT 1
25SP	09ALL_2		3 FROM->TO	G16_026B	POTTER COUNTY INTERCHANGE (WAUK 90343-A) 345/230/13.2KV TRANSFORMER CKT 1	556.5	0.03005	118.4291	Golden Spread REC - Mustang Interchange 230 kV Generation Bus - MUSTANG STATION 230KV CKT @1
25SP	09ALL_2		3 FROM->TO	G16_026B	POTTER COUNTY INTERCHANGE (WAUK 90343-A) 345/230/13.2KV TRANSFORMER CKT 1	556.5	0.03005	118.2738	Harrington Station East Bus 230/24.0KV TRANSFORMER CKT 1
25SP	09ALL_2		3 FROM->TO	G16_026B	POTTER COUNTY INTERCHANGE (WAUK 90343-A) 345/230/13.2KV TRANSFORMER CKT 1	556.5	0.03005	118.2738	HARRINGTON STATION 230/24.0KV TRANSFORMER CKT 1
25SP	09ALL_2		3 FROM->TO	G16_026B	POTTER COUNTY INTERCHANGE (WAUK 90343-A) 345/230/13.2KV TRANSFORMER CKT 1	556.5	0.03005	118.2738	Harrington Station Mid Bus 230/24.0KV TRANSFORMER CKT 1
25SP	09ALL		0 FROM->TO	G16_026B	POTTER COUNTY INTERCHANGE (WAUK 90343-A) 345/230/13.2KV TRANSFORMER CKT 1	544.1	0.0299	121.3967	P13:230-345:SPS:HITCHLAND.1
25SP	09ALL		0 FROM->TO	G16_026B	POTTER COUNTY INTERCHANGE (WAUK 90343-A) 345/230/13.2KV TRANSFORMER CKT 1	544.1	0.0299	121.36	P13:230-345:SPS:HITCHLAND.1
25SP	09ALL		0 FROM->TO	G16_026B	POTTER COUNTY INTERCHANGE (WAUK 90343-A) 345/230/13.2KV TRANSFORMER CKT 1	544.1	0.0299	119.8713	P12:345:SPS:J11.1.TUCO.BORDER
25SP	09ALL		0 FROM->TO	G16_026B	POTTER COUNTY INTERCHANGE (WAUK 90343-A) 345/230/13.2KV TRANSFORMER CKT 1	544.1	0.0299	119.8713	P12:345:SPS:J11.1.TUCO.BORDER
25SP	09ALL		0 FROM->TO	G16_026B	POTTER COUNTY INTERCHANGE (WAUK 90343-A) 345/230/13.2KV TRANSFORMER CKT 1	544.1	0.0299	119.8713	P12:345:SPS:J11.1.TUCO.BORDER
25SP	09ALL		0 FROM->TO	G16_026B	POTTER COUNTY INTERCHANGE (WAUK 90343-A) 345/230/13.2KV TRANSFORMER CKT 1	556.5	0.0299	118.8894	Golden Spread REC - Mustang Interchange 230 kV Generation Bus - MUSTANG STATION 230KV CKT @1
25SP	09ALL		0 FROM->TO	G16_026B	POTTER COUNTY INTERCHANGE (WAUK 90343-A) 345/230/13.2KV TRANSFORMER CKT 1	556.5	0.0299	118.8355	Golden Spread REC - Mustang Interchange 230 kV Generation Bus - MUSTANG STATION 230KV CKT @1
25SP	09ALL		0 FROM->TO	G16_026B	POTTER COUNTY INTERCHANGE (WAUK 90343-A) 345/230/13.2KV TRANSFORMER CKT 1	556.5	0.0299	117.38	Hitchland Interchange (SIEM 8743067) 345/230/13.2KV TRANSFORMER CKT 2
25SP	09ALL		0 FROM->TO	G16_026B	POTTER COUNTY INTERCHANGE (WAUK 90343-A) 345/230/13.2KV TRANSFORMER CKT 1	556.5	0.0299	117.38	Hitchland Interchange (SIEM 8743067) 345/230/13.2KV TRANSFORMER CKT 2
25SP	09ALL		0 FROM->TO	G16_026B	POTTER COUNTY INTERCHANGE (WAUK 90343-A) 345/230/13.2KV TRANSFORMER CKT 1	556.5	0.0299	117.38	Hitchland Interchange (SIEM 8743067) 345/230/13.2KV TRANSFORMER CKT 2
25SP	09ALL		0 FROM->TO	G16_026B	POTTER COUNTY INTERCHANGE (WAUK 90343-A) 345/230/13.2KV TRANSFORMER CKT 1	544.1	0.0299	122.7676	TOLK STATION WEST 230/24.0KV TRANSFORMER CKT 1
25SP	09ALL		0 FROM->TO	G16_026B	POTTER COUNTY INTERCHANGE (WAUK 90343-A) 345/230/13.2KV TRANSFORMER CKT 1	544.1	0.0299	122.7337	TOLK STATION EAST 230/24.0KV TRANSFORMER CKT 1
25SP	09ALL		0 FROM->TO	G16_026B	POTTER COUNTY INTERCHANGE (WAUK 90343-A) 345/230/13.2KV TRANSFORMER CKT 1	544.1	0.0299	120.9414	Golden Spread REC - Mustang Interchange 230 kV Generation Bus - MUSTANG STATION 230KV CKT @1
25SP	09ALL		0 FROM->TO	G16_026B	POTTER COUNTY INTERCHANGE (WAUK 90343-A) 345/230/13.2KV TRANSFORMER CKT 1	556.5	0.0299	120.2118	TOLK STATION WEST 230/24.0KV TRANSFORMER CKT 1
25SP	09ALL		0 FROM->TO	G16_026B	POTTER COUNTY INTERCHANGE (WAUK 90343-A) 345/230/13.2KV TRANSFORMER CKT 1	556.5	0.0299	120.1787	TOLK STATION EAST 230/24.0KV TRANSFORMER CKT 1
25SP	09ALL		0 FROM->TO	G16_026B	POTTER COUNTY INTERCHANGE (WAUK 90343-A) 345/230/13.2KV TRANSFORMER CKT 1	544.1	0.0299	120.7796	Harrington Station East Bus 230/24.0KV TRANSFORMER CKT 1
25SP	09ALL		0 FROM->TO	G16_026B	POTTER COUNTY INTERCHANGE (WAUK 90343-A) 345/230/13.2KV TRANSFORMER CKT 1	544.1	0.0299	120.7796	HARRINGTON STATION 230/24.0KV TRANSFORMER CKT 1
25SP	09ALL		0 FROM->TO	G16_026B	POTTER COUNTY INTERCHANGE (WAUK 90343-A) 345/230/13.2KV TRANSFORMER CKT 1	544.1	0.0299	120.7796	Harrington Station Mid Bus 230/24.0KV TRANSFORMER CKT 1
25SP	09ALL		0 FROM->TO	G16_026B	POTTER COUNTY INTERCHANGE (WAUK 90343-A) 345/230/13.2KV TRANSFORMER CKT 1	556.5	0.0299	118.4262	Golden Spread REC - Mustang Interchange 230 kV Generation Bus - MUSTANG STATION 230KV CKT @1
25SP	09ALL		0 FROM->TO	G16_026B	POTTER COUNTY INTERCHANGE (WAUK 90343-A) 345/230/13.2KV TRANSFORMER CKT 1	556.5	0.0299	118.2681	Harrington Station East Bus 230/24.0KV TRANSFORMER CKT 1
25SP	09ALL		0 FROM->TO	G16_026B	POTTER COUNTY INTERCHANGE (WAUK 90343-A) 345/230/13.2KV TRANSFORMER CKT 1	556.5	0.0299	118.2681	HARRINGTON STATION 230/24.0KV TRANSFORMER CKT 1
25SP	09ALL		0 FROM->TO	G16_026B	POTTER COUNTY INTERCHANGE (WAUK 90343-A) 345/230/13.2KV TRANSFORMER CKT 1	556.5	0.0299	118.2681	Harrington Station Mid Bus 230/24.0KV TRANSFORMER CKT 1
17SP	08ALL		0 TO->FROM	G16_010A	RENFROW4 138.00 - RENFROW4 138.00 138KV CKT 1	179	0.05814	120.108	VIOLA 7 345.00 - WICHITA 345KV CKT 1

SEASON	GROUP	SCENARIO	DIRECTION	SOURCE	MONITORED ELEMENT	RATE		CONTINGENCY		CONTINGENCY
						(MVA)	TDF	LOADING %		
16WP	08ALL	0	TO->FROM	G16_010A	RENFROW4 138.00 - RENFROW4 138.00 138KV CKT 1	178.9	0.05807	114.011	VIOLA 7 345.00 - WICHITA 345KV CKT 1	
17G	08ALL	0	TO->FROM	G16_010A	RENFROW4 138.00 - RENFROW4 138.00 138KV CKT 1	179	0.05771	117.7092	VIOLA 7 345.00 - WICHITA 345KV CKT 1	
17G	08ALL	0	TO->FROM	G16_010A	RENFROW4 138.00 - RENFROW4 138.00 138KV CKT 1	179	0.05198	123.928	HUNTERS7 345.00 - WOODRING 345KV CKT 1	
17G	08ALL	0	TO->FROM	G16_010A	RENFROW4 138.00 - RENFROW4 138.00 138KV CKT 1	179	0.05198	109.5705	G16-072-TAP 345.00 - HUNTERS7 345.00 345KV CKT 1	
16WP	08ALL	0	TO->FROM	G16_010A	RENFROW4 138.00 - RENFROW4 138.00 138KV CKT 1	178.9	0.05174	121.5319	HUNTERS7 345.00 - WOODRING 345KV CKT 1	
16WP	08ALL	0	TO->FROM	G16_010A	RENFROW4 138.00 - RENFROW4 138.00 138KV CKT 1	178.9	0.05174	107.1663	G16-072-TAP 345.00 - HUNTERS7 345.00 345KV CKT 1	
17SP	08ALL	0	TO->FROM	G16_010A	RENFROW4 138.00 - RENFROW4 138.00 138KV CKT 1	179	0.05133	126.5988	HUNTERS7 345.00 - WOODRING 345KV CKT 1	
17SP	08ALL	0	TO->FROM	G16_010A	RENFROW4 138.00 - RENFROW4 138.00 138KV CKT 1	179	0.05133	112.2412	G16-072-TAP 345.00 - HUNTERS7 345.00 345KV CKT 1	
20WP	08ALL	0	TO->FROM	G16_010A	RENFROW4 138.00 - RENFROW4 138.00 138KV CKT 1	178.9	0.04455	117.0492	HUNTERS7 345.00 - WOODRING 345KV CKT 1	
20WP	08ALL	0	TO->FROM	G16_010A	RENFROW4 138.00 - RENFROW4 138.00 138KV CKT 1	178.9	0.04455	103.6897	G16-072-TAP 345.00 - HUNTERS7 345.00 345KV CKT 1	
20SP	08ALL	0	TO->FROM	G16_010A	RENFROW4 138.00 - RENFROW4 138.00 138KV CKT 1	179	0.04404	122.6784	HUNTERS7 345.00 - WOODRING 345KV CKT 1	
20SP	08ALL	0	TO->FROM	G16_010A	RENFROW4 138.00 - RENFROW4 138.00 138KV CKT 1	179	0.04404	109.2706	G16-072-TAP 345.00 - HUNTERS7 345.00 345KV CKT 1	
25SP	08ALL	0	TO->FROM	G16_010A	RENFROW4 138.00 - RENFROW4 138.00 138KV CKT 1	179	0.04374	134.3888	HUNTERS7 345.00 - WOODRING 345KV CKT 1	
25SP	08ALL	0	TO->FROM	G16_010A	RENFROW4 138.00 - RENFROW4 138.00 138KV CKT 1	179	0.04374	121.0369	G16-072-TAP 345.00 - HUNTERS7 345.00 345KV CKT 1	
20L	08ALL	0	TO->FROM	G16_010A	RENFROW4 138.00 - RENFROW4 138.00 138KV CKT 1	179	0.04336	122.4964	HUNTERS7 345.00 - WOODRING 345KV CKT 1	
20L	08ALL	0	TO->FROM	G16_010A	RENFROW4 138.00 - RENFROW4 138.00 138KV CKT 1	179	0.04336	109.1445	G16-072-TAP 345.00 - HUNTERS7 345.00 345KV CKT 1	
20WP	08ALL	0	TO->FROM	G16_010A	RENFROW4 138.00 - RENFROW4 138.00 138KV CKT 1	178.9	0.03663	100.131	VIOLA 7 345.00 - WICHITA 345KV CKT 1	
20SP	08ALL	0	TO->FROM	G16_010A	RENFROW4 138.00 - RENFROW4 138.00 138KV CKT 1	179	0.03628	108.8091	VIOLA 7 345.00 - WICHITA 345KV CKT 1	
25SP	08ALL	0	TO->FROM	G16_010A	RENFROW4 138.00 - RENFROW4 138.00 138KV CKT 1	179	0.03603	117.2829	VIOLA 7 345.00 - WICHITA 345KV CKT 1	
20L	08ALL	0	TO->FROM	G16_010A	RENFROW4 138.00 - RENFROW4 138.00 138KV CKT 1	179	0.03447	100.077	VIOLA 7 345.00 - WICHITA 345KV CKT 1	
25SP	08ALL	0	FROM->TO	G16_010A	RENFROW4 138.00 - WAKITAS4 138.00 138KV CKT 1	228	0.04374	101.6474	HUNTERS7 345.00 - WOODRING 345KV CKT 1	
20SP	00_2	0	TO->FROM	G16_019	ROCKY POINT - SUNNYSIDE 138KV CKT 1	191	0.05152	105.7856	SUNNYSIDE - UNIROYAL 138KV CKT 1	
20SP	00_2	2	TO->FROM	G16_019	ROCKY POINT - SUNNYSIDE 138KV CKT 1	191	0.05152	105.7856	SUNNYSIDE - UNIROYAL 138KV CKT 1	
17SP	00_2	0	TO->FROM	G16_019	ROCKY POINT - SUNNYSIDE 138KV CKT 1	191	0.05137	104.8042	SUNNYSIDE - UNIROYAL 138KV CKT 1	
17SP	00_2	2	TO->FROM	G16_019	ROCKY POINT - SUNNYSIDE 138KV CKT 1	191	0.05137	104.8042	SUNNYSIDE - UNIROYAL 138KV CKT 1	
17SP	16ALL	0	TO->FROM	G16_035	SCOTTSBLUFF - VICTORY HILL 115KV CKT 1	119.4	0.03444	102.4998	P13:230-345:NPPD:STEGALL3:KV3A	
17SP	16ALL	0	TO->FROM	G16_035	SCOTTSBLUFF - VICTORY HILL 115KV CKT 1	119.4	0.03444	102.4998	STEGALL - STEGALL TRANSFORMER 230KV CKT 1	
17SP	16ALL	0	TO->FROM	G16_035	SCOTTSBLUFF - VICTORY HILL 115KV CKT 1	119.4	0.03444	102.416	STEGALL (SGQ KV3A) 345/230/13.8KV TRANSFORMER CKT 1	
17SP	16ALL	2	TO->FROM	G16_035	SCOTTSBLUFF - VICTORY HILL 115KV CKT 1	119.4	0.03405	102.5161	P13:230-345:NPPD:STEGALL3:KV3A	
17SP	16ALL	2	TO->FROM	G16_035	SCOTTSBLUFF - VICTORY HILL 115KV CKT 1	119.4	0.03405	102.5161	STEGALL - STEGALL TRANSFORMER 230KV CKT 1	
17SP	16ALL	2	TO->FROM	G16_035	SCOTTSBLUFF - VICTORY HILL 115KV CKT 1	119.4	0.03405	102.5161	STEGALL (SGQ KV3A) 345/230/13.8KV TRANSFORMER CKT 1	
17SP	17ALL	0	TO->FROM	G16_006	SIDNEY - SIDNEY TRANSFORMER 230KV CKT 1	400	0.13033	102.0536	KEYSTONE - SIDNEY1-LNX3345.00 345KV CKT 1	
17SP	17ALL	0	TO->FROM	G16_006	SIDNEY - SIDNEY TRANSFORMER 230KV CKT 1	400	0.13033	102.0536	SIDNEY - SIDNEY1-LNX3345.00 345KV CKT Z	
17SP	16ALL	0	TO->FROM	G16_035	SIDNEY - SIDNEY TRANSFORMER 230KV CKT 1	399.2	0.03475	128.0034	KEYSTONE - SIDNEY1-LNX3345.00 345KV CKT 1	
17SP	16ALL	0	TO->FROM	G16_035	SIDNEY - SIDNEY TRANSFORMER 230KV CKT 1	399.2	0.03475	128.0034	SIDNEY - SIDNEY1-LNX3345.00 345KV CKT Z	
17SP	16ALL	2	TO->FROM	G16_035	SIDNEY - SIDNEY TRANSFORMER 230KV CKT 1	399.2	0.03425	128.0288	SIDNEY - SIDNEY1-LNX3345.00 345KV CKT Z	
17SP	16ALL	2	TO->FROM	G16_035	SIDNEY - SIDNEY TRANSFORMER 230KV CKT 1	399.2	0.03425	128.0288	KEYSTONE - SIDNEY1-LNX3345.00 345KV CKT 1	
25SP	16ALL	0	TO->FROM	G16_035	SIDNEY - SIDNEY TRANSFORMER 230KV CKT 1	399.7	0.03228	119.2699	SIDNEY - SIDNEY1-LNX3345.00 345KV CKT Z	
25SP	16ALL	0	TO->FROM	G16_035	SIDNEY - SIDNEY TRANSFORMER 230KV CKT 1	399.7	0.03228	119.2699	KEYSTONE - SIDNEY1-LNX3345.00 345KV CKT 1	
20SP	16ALL	0	TO->FROM	G16_035	SIDNEY - SIDNEY TRANSFORMER 230KV CKT 1	399.5	0.03176	118.0684	SIDNEY - SIDNEY1-LNX3345.00 345KV CKT Z	
20SP	16ALL	0	TO->FROM	G16_035	SIDNEY - SIDNEY TRANSFORMER 230KV CKT 1	399.5	0.03176	118.0684	KEYSTONE - SIDNEY1-LNX3345.00 345KV CKT 1	
25SP	16ALL	2	TO->FROM	G16_035	SIDNEY - SIDNEY TRANSFORMER 230KV CKT 1	399.7	0.03176	119.2931	KEYSTONE - SIDNEY1-LNX3345.00 345KV CKT 1	
25SP	16ALL	2	TO->FROM	G16_035	SIDNEY - SIDNEY TRANSFORMER 230KV CKT 1	399.7	0.03176	119.2931	SIDNEY - SIDNEY1-LNX3345.00 345KV CKT Z	
20SP	16ALL	2	TO->FROM	G16_035	SIDNEY - SIDNEY TRANSFORMER 230KV CKT 1	399.5	0.03124	118.0938	SIDNEY - SIDNEY1-LNX3345.00 345KV CKT Z	
20SP	16ALL	2	TO->FROM	G16_035	SIDNEY - SIDNEY TRANSFORMER 230KV CKT 1	399.5	0.03124	118.0938	KEYSTONE - SIDNEY1-LNX3345.00 345KV CKT 1	
16WP	16ALL	0	TO->FROM	G16_035	SIDNEY - SIDNEY TRANSFORMER 230KV CKT 1	399	0.03088	112.0545	KEYSTONE - SIDNEY1-LNX3345.00 345KV CKT 1	
16WP	16ALL	0	TO->FROM	G16_035	SIDNEY - SIDNEY TRANSFORMER 230KV CKT 1	399	0.03088	112.0545	SIDNEY - SIDNEY1-LNX3345.00 345KV CKT Z	
16WP	16ALL	2	TO->FROM	G16_035	SIDNEY - SIDNEY TRANSFORMER 230KV CKT 1	399	0.03039	112.0276	KEYSTONE - SIDNEY1-LNX3345.00 345KV CKT 1	
16WP	16ALL	2	TO->FROM	G16_035	SIDNEY - SIDNEY TRANSFORMER 230KV CKT 1	399	0.03039	112.0276	SIDNEY - SIDNEY1-LNX3345.00 345KV CKT Z	
17SP	16ALL	0	FROM->TO	G16_035	SIDNEY (SDQ KV2A) 345/230/13.8KV TRANSFORMER CKT 1	479.3	0.03475	106.6116	KEYSTONE - SIDNEY1-LNX3345.00 345KV CKT 1	
17SP	16ALL	0	FROM->TO	G16_035	SIDNEY (SDQ KV2A) 345/230/13.8KV TRANSFORMER CKT 1	479.3	0.03475	106.6116	SIDNEY - SIDNEY1-LNX3345.00 345KV CKT Z	
17SP	16ALL	0	FROM->TO	G16_035	SIDNEY (SDQ KV2A) 345/230/13.8KV TRANSFORMER CKT 1	479.6	0.03475	106.5658	KEYSTONE - SIDNEY1-LNX3345.00 345KV CKT 1	
17SP	16ALL	0	FROM->TO	G16_035	SIDNEY (SDQ KV2A) 345/230/13.8KV TRANSFORMER CKT 1	479.6	0.03475	106.5658	SIDNEY - SIDNEY1-LNX3345.00 345KV CKT Z	
17SP	16ALL	2	FROM->TO	G16_035	SIDNEY (SDQ KV2A) 345/230/13.8KV TRANSFORMER CKT 1	479.3	0.03425	106.6328	SIDNEY - SIDNEY1-LNX3345.00 345KV CKT Z	
17SP	16ALL	2	FROM->TO	G16_035	SIDNEY (SDQ KV2A) 345/230/13.8KV TRANSFORMER CKT 1	479.3	0.03425	106.6328	KEYSTONE - SIDNEY1-LNX3345.00 345KV CKT 1	

SEASON	GROUP	SCENARIO	DIRECTION	SOURCE	MONITORED ELEMENT	RATE		CONTINGENCY		CONTINGENCY
						(MVA)	TDF	LOADING %		
17SP	16ALL		2 FROM->TO	G16_035	SIDNEY (SDQ KV2A) 345/230/13.8KV TRANSFORMER CKT 1	479.6	0.03425	106.5869	SIDNEY - SIDNEY1-LNX3345.00 345KV CKT Z	
17SP	16ALL		2 FROM->TO	G16_035	SIDNEY (SDQ KV2A) 345/230/13.8KV TRANSFORMER CKT 1	479.6	0.03425	106.5869	KEYSTONE - SIDNEY1-LNX3345.00 345KV CKT 1	
17G	09ALL_2		2 TO->FROM	G16_026B	SIOUX CITY - TWIN CHURCH 230KV CKT 1	315.5	0.04786	100.7952	HOSKINS - RAUN 345KV CKT 1	
17G	09ALL_2		3 TO->FROM	G16_026B	SIOUX CITY - TWIN CHURCH 230KV CKT 1	315.5	0.04696	100.7499	HOSKINS - RAUN 345KV CKT 1	
20L	09ALL		0 TO->FROM	G16_026B	SIOUX CITY - TWIN CHURCH 230KV CKT 1	310.8	0.04605	111.938	HOSKINS - RAUN 345KV CKT 1	
20L	09ALL_2		3 TO->FROM	G16_026B	SIOUX CITY - TWIN CHURCH 230KV CKT 1	310.8	0.04446	111.8242	HOSKINS - RAUN 345KV CKT 1	
17G	09ALL_1		2 TO->FROM	G16_026A	SIOUX CITY - TWIN CHURCH 230KV CKT 1	315.5	0.04285	100.5438	HOSKINS - RAUN 345KV CKT 1	
17G	09ALL_1		3 TO->FROM	G16_026A	SIOUX CITY - TWIN CHURCH 230KV CKT 1	315.5	0.04134	100.4684	HOSKINS - RAUN 345KV CKT 1	
20L	09ALL		0 TO->FROM	G16_026A	SIOUX CITY - TWIN CHURCH 230KV CKT 1	310.8	0.04039	111.6523	HOSKINS - RAUN 345KV CKT 1	
20L	09ALL_1		3 TO->FROM	G16_026A	SIOUX CITY - TWIN CHURCH 230KV CKT 1	310.8	0.03775	111.4823	HOSKINS - RAUN 345KV CKT 1	
20L	08ALL		0 TO->FROM	G16_033	SPVALLY4 138.00 - STILLWATER 138KV CKT 1	217.9	0.0299	100.6571	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	
25SP	00_2		0 TO->FROM	G16_019	STLN-DEMARC6 - SWEETWATER 230KV CKT 1	352.2	0.0338	102.1863	G14-074T 345.00 - TUCO INTERCHANGE 345KV CKT 1	
25SP	00_2		0 TO->FROM	G16_019	STLN-DEMARC6 - SWEETWATER 230KV CKT 1	352.2	0.0338	101.0222	G14-074T 345.00 - OKLAUNION 345KV CKT 1	
25SP	00_2		2 TO->FROM	G16_019	STLN-DEMARC6 - SWEETWATER 230KV CKT 1	352.2	0.0338	102.1863	G14-074T 345.00 - TUCO INTERCHANGE 345KV CKT 1	
25SP	00_2		2 TO->FROM	G16_019	STLN-DEMARC6 - SWEETWATER 230KV CKT 1	352.2	0.0338	101.0222	G14-074T 345.00 - OKLAUNION 345KV CKT 1	
17SP	16ALL		2 TO->FROM	G16_035	SULLEY BUTTE - SULLYBT-LNX3230.00 230KV CKT Z	256.2	0.18292	108.3995	G16-017-TAP 345.00 - G16035-TAPII345.00 345KV CKT 1	
17SP	16ALL		2 TO->FROM	G16_035	SULLEY BUTTE - SULLYBT-LNX3230.00 230KV CKT Z	256.2	0.18292	108.2434	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1	
17SP	16ALL		2 TO->FROM	G16_035	SULLEY BUTTE - SULLYBT-LNX3230.00 230KV CKT Z	256.2	0.18292	108.2434	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z	
17G	16ALL		2 TO->FROM	G16_035	SULLEY BUTTE - SULLYBT-LNX3230.00 230KV CKT Z	259.2	0.18123	108.7604	G16-017-TAP 345.00 - G16035-TAPII345.00 345KV CKT 1	
17G	16ALL		2 TO->FROM	G16_035	SULLEY BUTTE - SULLYBT-LNX3230.00 230KV CKT Z	259.2	0.18123	108.6447	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1	
17G	16ALL		2 TO->FROM	G16_035	SULLEY BUTTE - SULLYBT-LNX3230.00 230KV CKT Z	259.2	0.18123	108.6447	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z	
25SP	16ALL		2 TO->FROM	G16_035	SULLEY BUTTE - SULLYBT-LNX3230.00 230KV CKT Z	256.5	0.17992	100.5161	G16-017-TAP 345.00 - G16035-TAPII345.00 345KV CKT 1	
25SP	16ALL		2 TO->FROM	G16_035	SULLEY BUTTE - SULLYBT-LNX3230.00 230KV CKT Z	256.5	0.17992	100.3991	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1	
25SP	16ALL		2 TO->FROM	G16_035	SULLEY BUTTE - SULLYBT-LNX3230.00 230KV CKT Z	256.5	0.17992	100.3991	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z	
20L	16ALL		2 TO->FROM	G16_035	SULLEY BUTTE - SULLYBT-LNX3230.00 230KV CKT Z	258.5	0.17789	104.2614	G16-017-TAP 345.00 - G16035-TAPII345.00 345KV CKT 1	
20L	16ALL		2 TO->FROM	G16_035	SULLEY BUTTE - SULLYBT-LNX3230.00 230KV CKT Z	258.5	0.17789	104.2227	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z	
20L	16ALL		2 TO->FROM	G16_035	SULLEY BUTTE - SULLYBT-LNX3230.00 230KV CKT Z	258.5	0.17789	104.2227	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1	
17SP	16ALL		2 TO->FROM	G16_035	SULLYBT-LNX3230.00 - WHITLOK 230KV CKT 1	263.4	0.18292	105.4364	G16-017-TAP 345.00 - G16035-TAPII345.00 345KV CKT 1	
17SP	16ALL		2 TO->FROM	G16_035	SULLYBT-LNX3230.00 - WHITLOK 230KV CKT 1	263.4	0.18292	105.2846	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z	
17SP	16ALL		2 TO->FROM	G16_035	SULLYBT-LNX3230.00 - WHITLOK 230KV CKT 1	263.4	0.18292	105.2846	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1	
17G	16ALL		2 TO->FROM	G16_035	SULLYBT-LNX3230.00 - WHITLOK 230KV CKT 1	262.9	0.18123	107.2297	G16-017-TAP 345.00 - G16035-TAPII345.00 345KV CKT 1	
17G	16ALL		2 TO->FROM	G16_035	SULLYBT-LNX3230.00 - WHITLOK 230KV CKT 1	262.9	0.18123	107.1156	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1	
17G	16ALL		2 TO->FROM	G16_035	SULLYBT-LNX3230.00 - WHITLOK 230KV CKT 1	262.9	0.18123	107.1156	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z	
20L	16ALL		2 TO->FROM	G16_035	SULLYBT-LNX3230.00 - WHITLOK 230KV CKT 1	262.5	0.17789	102.6727	G16-017-TAP 345.00 - G16035-TAPII345.00 345KV CKT 1	
20L	16ALL		2 TO->FROM	G16_035	SULLYBT-LNX3230.00 - WHITLOK 230KV CKT 1	262.5	0.17789	102.6346	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z	
20L	16ALL		2 TO->FROM	G16_035	SULLYBT-LNX3230.00 - WHITLOK 230KV CKT 1	262.5	0.17789	102.6346	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1	
20SP	00_2		0 FROM->TO	G16_019	SUNNYSIDE - UNIROYAL 138KV CKT 1	222	0.084	103.3849	JOHNSON COUNTY - SUNNYSIDE 345KV CKT 1	
20SP	00_2		2 FROM->TO	G16_019	SUNNYSIDE - UNIROYAL 138KV CKT 1	222	0.084	103.3849	JOHNSON COUNTY - SUNNYSIDE 345KV CKT 1	
17SP	00_2		0 FROM->TO	G16_019	SUNNYSIDE - UNIROYAL 138KV CKT 1	222	0.08386	103.6888	JOHNSON COUNTY - SUNNYSIDE 345KV CKT 1	
17SP	00_2		2 FROM->TO	G16_019	SUNNYSIDE - UNIROYAL 138KV CKT 1	222	0.08386	103.6888	JOHNSON COUNTY - SUNNYSIDE 345KV CKT 1	
20SP	00_2		0 FROM->TO	G16_019	SUNNYSIDE - UNIROYAL 138KV CKT 1	222	0.06287	108.0979	ROCKY POINT - SUNNYSIDE 138KV CKT 1	
20SP	00_2		2 FROM->TO	G16_019	SUNNYSIDE - UNIROYAL 138KV CKT 1	222	0.06287	108.0979	ROCKY POINT - SUNNYSIDE 138KV CKT 1	
17SP	00_2		0 FROM->TO	G16_019	SUNNYSIDE - UNIROYAL 138KV CKT 1	222	0.06267	107.22	ROCKY POINT - SUNNYSIDE 138KV CKT 1	
17SP	00_2		2 FROM->TO	G16_019	SUNNYSIDE - UNIROYAL 138KV CKT 1	222	0.06267	107.22	ROCKY POINT - SUNNYSIDE 138KV CKT 1	
20SP	00_2		0 FROM->TO	G16_019	SUNNYSIDE - UNIROYAL 138KV CKT 1	222	0.05619	106.019	JOHNSON COUNTY (JOHNCO) 345/138/13.8KV TRANSFORMER CKT 1	
20SP	00_2		2 FROM->TO	G16_019	SUNNYSIDE - UNIROYAL 138KV CKT 1	222	0.05619	106.019	JOHNSON COUNTY (JOHNCO) 345/138/13.8KV TRANSFORMER CKT 1	
17SP	00_2		0 FROM->TO	G16_019	SUNNYSIDE - UNIROYAL 138KV CKT 1	222	0.05596	104.3868	JOHNSON COUNTY (JOHNCO) 345/138/13.8KV TRANSFORMER CKT 1	
17SP	00_2		2 FROM->TO	G16_019	SUNNYSIDE - UNIROYAL 138KV CKT 1	222	0.05596	104.3868	JOHNSON COUNTY (JOHNCO) 345/138/13.8KV TRANSFORMER CKT 1	
20SP	00_2		0 FROM->TO	G16_019	SUNNYSIDE (SUNNYS3) 345/138/13.8KV TRANSFORMER CKT 1	329.1	0.08656	106.6774	SUNNYSIDE (SUNNYS3) 345/138/13.8KV TRANSFORMER CKT 1	
20SP	00_2		0 FROM->TO	G16_019	SUNNYSIDE (SUNNYS3) 345/138/13.8KV TRANSFORMER CKT 1	329.9	0.08656	106.2975	SUNNYSIDE (SUNNYS3) 345/138/13.8KV TRANSFORMER CKT 1	
20SP	00_2		2 FROM->TO	G16_019	SUNNYSIDE (SUNNYS3) 345/138/13.8KV TRANSFORMER CKT 1	329.1	0.08656	106.6774	SUNNYSIDE (SUNNYS3) 345/138/13.8KV TRANSFORMER CKT 1	
20SP	00_2		2 FROM->TO	G16_019	SUNNYSIDE (SUNNYS3) 345/138/13.8KV TRANSFORMER CKT 1	329.9	0.08656	106.2975	SUNNYSIDE (SUNNYS3) 345/138/13.8KV TRANSFORMER CKT 1	
17SP	00_2		0 FROM->TO	G16_019	SUNNYSIDE (SUNNYS3) 345/138/13.8KV TRANSFORMER CKT 1	329.4	0.08624	104.767	SUNNYSIDE (SUNNYS3) 345/138/13.8KV TRANSFORMER CKT 1	
17SP	00_2		2 FROM->TO	G16_019	SUNNYSIDE (SUNNYS3) 345/138/13.8KV TRANSFORMER CKT 1	329.8	0.08624	104.5489	SUNNYSIDE (SUNNYS3) 345/138/13.8KV TRANSFORMER CKT 1	
17SP	00_2		2 FROM->TO	G16_019	SUNNYSIDE (SUNNYS3) 345/138/13.8KV TRANSFORMER CKT 1	329.4	0.08624	104.767	SUNNYSIDE (SUNNYS3) 345/138/13.8KV TRANSFORMER CKT 1	

SEASON	GROUP	SCENARIO	DIRECTION	SOURCE	MONITORED ELEMENT	RATE		CONTINGENCY		CONTINGENCY
						(MVA)	TDF	LOADING %		
17SP	00_2		2 FROM->TO	G16_019	SUNNYSIDE (SUNNYS03) 345/138/13.8KV TRANSFORMER CKT 1	329.8	0.08624	104.5489	SUNNYSIDE (SUNNYS05) 345/138/13.8KV TRANSFORMER CKT 1	
16WP	08ALL		0 FROM->TO	G16_010A	SWISSVALE - WEST GARDNER 345KV CKT 1	715.5	0.08397	111.1203	G16-012-TAP 345.00 - WAVERLY7 345.00 345KV CKT 1	
16WP	08ALL		0 FROM->TO	G16_010A	SWISSVALE - WEST GARDNER 345KV CKT 1	715.5	0.08397	117.2382	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	
16WP	08ALL		0 FROM->TO	G16_010A	SWISSVALE - WEST GARDNER 345KV CKT 1	715.5	0.08397	104.7891	WAVERLY7 345.00 - WOLF CREEK 345KV CKT 1	
16WP	08ALL		0 FROM->TO	G16_010A	SWISSVALE - WEST GARDNER 345KV CKT 1	715.5	0.08343	115.3945	HOYT - STRANGER CREEK 345KV CKT 1	
16WP	03ALL		2 FROM->TO	G16_010B	SWISSVALE - WEST GARDNER 345KV CKT 1	715.5	0.08224	103.357	HOYT - STRANGER CREEK 345KV CKT 1	
16WP	03ALL		0 FROM->TO	G16_010B	SWISSVALE - WEST GARDNER 345KV CKT 1	715.4	0.08219	103.6493	HOYT - STRANGER CREEK 345KV CKT 1	
16WP	03ALL		3 FROM->TO	G16_010B	SWISSVALE - WEST GARDNER 345KV CKT 1	715.5	0.08168	103.3168	HOYT - STRANGER CREEK 345KV CKT 1	
16WP	03ALL		4 FROM->TO	G16_010B	SWISSVALE - WEST GARDNER 345KV CKT 1	715.5	0.08105	103.2739	HOYT - STRANGER CREEK 345KV CKT 1	
20WP	08ALL		0 FROM->TO	G16_010A	SWISSVALE - WEST GARDNER 345KV CKT 1	715.4	0.08039	113.4461	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	
20WP	08ALL		0 FROM->TO	G16_010A	SWISSVALE - WEST GARDNER 345KV CKT 1	715.4	0.08039	107.3283	G16-012-TAP 345.00 - WAVERLY7 345.00 345KV CKT 1	
20WP	08ALL		0 FROM->TO	G16_010A	SWISSVALE - WEST GARDNER 345KV CKT 1	715.4	0.08039	101.0241	WAVERLY7 345.00 - WOLF CREEK 345KV CKT 1	
20L	08ALL		0 FROM->TO	G16_010A	SWISSVALE - WEST GARDNER 345KV CKT 1	716.2	0.07968	111.2265	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	
20L	08ALL		0 FROM->TO	G16_010A	SWISSVALE - WEST GARDNER 345KV CKT 1	716.2	0.07968	105.1823	G16-012-TAP 345.00 - WAVERLY7 345.00 345KV CKT 1	
17SP	03ALL		0 FROM->TO	G16_010B	SWISSVALE - WEST GARDNER 345KV CKT 1	714.4	0.07943	102.1086	G16-012-TAP 345.00 - WAVERLY7 345.00 345KV CKT 1	
17SP	03ALL		0 FROM->TO	G16_010B	SWISSVALE - WEST GARDNER 345KV CKT 1	714.4	0.07943	102.0246	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	
17SP	03ALL		0 FROM->TO	G16_010B	SWISSVALE - WEST GARDNER 345KV CKT 1	714.4	0.07943	100.8348	WAVERLY7 345.00 - WOLF CREEK 345KV CKT 1	
17SP	03ALL		4 FROM->TO	G16_010B	SWISSVALE - WEST GARDNER 345KV CKT 1	714.4	0.07914	102.1297	G16-012-TAP 345.00 - WAVERLY7 345.00 345KV CKT 1	
17SP	03ALL		4 FROM->TO	G16_010B	SWISSVALE - WEST GARDNER 345KV CKT 1	714.4	0.07914	102.0458	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	
17SP	03ALL		4 FROM->TO	G16_010B	SWISSVALE - WEST GARDNER 345KV CKT 1	714.4	0.07914	100.8699	WAVERLY7 345.00 - WOLF CREEK 345KV CKT 1	
17SP	03ALL		3 FROM->TO	G16_010B	SWISSVALE - WEST GARDNER 345KV CKT 1	714.4	0.07913	102.1438	G16-012-TAP 345.00 - WAVERLY7 345.00 345KV CKT 1	
17SP	03ALL		3 FROM->TO	G16_010B	SWISSVALE - WEST GARDNER 345KV CKT 1	714.4	0.07913	102.0598	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	
17SP	03ALL		3 FROM->TO	G16_010B	SWISSVALE - WEST GARDNER 345KV CKT 1	714.4	0.07913	100.8699	WAVERLY7 345.00 - WOLF CREEK 345KV CKT 1	
17SP	03ALL		2 FROM->TO	G16_010B	SWISSVALE - WEST GARDNER 345KV CKT 1	714.4	0.07912	102.1284	G16-012-TAP 345.00 - WAVERLY7 345.00 345KV CKT 1	
17SP	03ALL		2 FROM->TO	G16_010B	SWISSVALE - WEST GARDNER 345KV CKT 1	714.4	0.07912	102.0444	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	
17SP	03ALL		2 FROM->TO	G16_010B	SWISSVALE - WEST GARDNER 345KV CKT 1	714.4	0.07912	100.8546	WAVERLY7 345.00 - WOLF CREEK 345KV CKT 1	
20WP	08ALL		0 FROM->TO	G16_010A	SWISSVALE - WEST GARDNER 345KV CKT 1	715.4	0.07849	110.5857	HOYT - STRANGER CREEK 345KV CKT 1	
17SP	08ALL		0 FROM->TO	G16_010A	SWISSVALE - WEST GARDNER 345KV CKT 1	714.2	0.07844	118.9088	G16-012-TAP 345.00 - WAVERLY7 345.00 345KV CKT 1	
17SP	08ALL		0 FROM->TO	G16_010A	SWISSVALE - WEST GARDNER 345KV CKT 1	714.2	0.07844	125.1358	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	
17SP	08ALL		0 FROM->TO	G16_010A	SWISSVALE - WEST GARDNER 345KV CKT 1	714.2	0.07844	112.5521	WAVERLY7 345.00 - WOLF CREEK 345KV CKT 1	
17G	08ALL		0 FROM->TO	G16_010A	SWISSVALE - WEST GARDNER 345KV CKT 1	716.9	0.07811	113.3764	G16-012-TAP 345.00 - WAVERLY7 345.00 345KV CKT 1	
17G	08ALL		0 FROM->TO	G16_010A	SWISSVALE - WEST GARDNER 345KV CKT 1	716.9	0.07811	119.5132	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	
17G	08ALL		0 FROM->TO	G16_010A	SWISSVALE - WEST GARDNER 345KV CKT 1	716.9	0.07811	107.0576	WAVERLY7 345.00 - WOLF CREEK 345KV CKT 1	
25SP	08ALL		0 FROM->TO	G16_010A	SWISSVALE - WEST GARDNER 345KV CKT 1	715.4	0.07806	102.1885	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	
16WP	08ALL		0 FROM->TO	G16_010A	SWISSVALE - WEST GARDNER 345KV CKT 1	715.5	0.07805	111.8914	HOYT - JEFFREY ENERGY CENTER 345KV CKT 1	
17SP	03ALL		2 FROM->TO	G16_010B	SWISSVALE - WEST GARDNER 345KV CKT 1	714.4	0.07791	118	HOYT - STRANGER CREEK 345KV CKT 1	
17SP	03ALL		3 FROM->TO	G16_010B	SWISSVALE - WEST GARDNER 345KV CKT 1	714.4	0.07755	117.9905	HOYT - STRANGER CREEK 345KV CKT 1	
17G	03ALL		2 FROM->TO	G16_010B	SWISSVALE - WEST GARDNER 345KV CKT 1	717	0.07748	104.2243	HOYT - STRANGER CREEK 345KV CKT 1	
17G	03ALL		0 FROM->TO	G16_010B	SWISSVALE - WEST GARDNER 345KV CKT 1	717	0.07743	104.4862	HOYT - STRANGER CREEK 345KV CKT 1	
20SP	08ALL		0 FROM->TO	G16_010A	SWISSVALE - WEST GARDNER 345KV CKT 1	714.8	0.07715	115.095	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	
20SP	08ALL		0 FROM->TO	G16_010A	SWISSVALE - WEST GARDNER 345KV CKT 1	714.8	0.07715	108.8711	G16-012-TAP 345.00 - WAVERLY7 345.00 345KV CKT 1	
20SP	08ALL		0 FROM->TO	G16_010A	SWISSVALE - WEST GARDNER 345KV CKT 1	714.8	0.07715	102.5337	WAVERLY7 345.00 - WOLF CREEK 345KV CKT 1	
17SP	03ALL		0 FROM->TO	G16_010B	SWISSVALE - WEST GARDNER 345KV CKT 1	714.4	0.0771	118.0623	HOYT - STRANGER CREEK 345KV CKT 1	
17SP	03ALL		4 FROM->TO	G16_010B	SWISSVALE - WEST GARDNER 345KV CKT 1	714.4	0.07694	117.9335	HOYT - STRANGER CREEK 345KV CKT 1	
17G	03ALL		3 FROM->TO	G16_010B	SWISSVALE - WEST GARDNER 345KV CKT 1	717	0.07692	104.1702	HOYT - STRANGER CREEK 345KV CKT 1	
17SP	08ALL		0 FROM->TO	G16_010A	SWISSVALE - WEST GARDNER 345KV CKT 1	714.2	0.07681	129.9497	HOYT - STRANGER CREEK 345KV CKT 1	
16WP	03ALL		2 FROM->TO	G16_010B	SWISSVALE - WEST GARDNER 345KV CKT 1	715.5	0.07676	101.0138	HOYT - JEFFREY ENERGY CENTER 345KV CKT 1	
16WP	03ALL		0 FROM->TO	G16_010B	SWISSVALE - WEST GARDNER 345KV CKT 1	715.4	0.07669	101.3044	HOYT - JEFFREY ENERGY CENTER 345KV CKT 1	
17G	03ALL		4 FROM->TO	G16_010B	SWISSVALE - WEST GARDNER 345KV CKT 1	717	0.07629	104.1274	HOYT - STRANGER CREEK 345KV CKT 1	
16WP	03ALL		3 FROM->TO	G16_010B	SWISSVALE - WEST GARDNER 345KV CKT 1	715.5	0.07623	100.9876	HOYT - JEFFREY ENERGY CENTER 345KV CKT 1	
25SP	08ALL		0 FROM->TO	G16_010A	SWISSVALE - WEST GARDNER 345KV CKT 1	715.4	0.07567	104.9943	HOYT - STRANGER CREEK 345KV CKT 1	
16WP	03ALL		4 FROM->TO	G16_010B	SWISSVALE - WEST GARDNER 345KV CKT 1	715.5	0.07563	100.9461	HOYT - JEFFREY ENERGY CENTER 345KV CKT 1	
17G	08ALL		0 FROM->TO	G16_010A	SWISSVALE - WEST GARDNER 345KV CKT 1	716.9	0.07549	119.8984	HOYT - STRANGER CREEK 345KV CKT 1	
20SP	03ALL		0 FROM->TO	G16_010B	SWISSVALE - WEST GARDNER 345KV CKT 1	715.1	0.07489	104.4583	HOYT - STRANGER CREEK 345KV CKT 1	
20SP	08ALL		0 FROM->TO	G16_010A	SWISSVALE - WEST GARDNER 345KV CKT 1	714.8	0.07468	118.6487	HOYT - STRANGER CREEK 345KV CKT 1	

SEASON	GROUP	SCENARIO	DIRECTION	SOURCE	MONITORED ELEMENT	RATE		CONTINGENCY		CONTINGENCY
						(MVA)	TDF	LOADING %		
20SP	03ALL		3 FROM->TO	G16_010B	SWISSVALE - WEST GARDNER 345KV CKT 1	715.1	0.07457	104.4376	HOYT - STRANGER CREEK 345KV CKT 1	
20SP	03ALL		4 FROM->TO	G16_010B	SWISSVALE - WEST GARDNER 345KV CKT 1	715.1	0.07404	104.41	HOYT - STRANGER CREEK 345KV CKT 1	
20WP	08ALL		0 FROM->TO	G16_010A	SWISSVALE - WEST GARDNER 345KV CKT 1	715.4	0.07309	107.3488	HOYT - JEFFREY ENERGY CENTER 345KV CKT 1	
17SP	03ALL		2 FROM->TO	G16_010B	SWISSVALE - WEST GARDNER 345KV CKT 1	714.4	0.07287	115.7999	HOYT - JEFFREY ENERGY CENTER 345KV CKT 1	
17SP	03ALL		3 FROM->TO	G16_010B	SWISSVALE - WEST GARDNER 345KV CKT 1	714.4	0.07252	115.7904	HOYT - JEFFREY ENERGY CENTER 345KV CKT 1	
17G	03ALL		2 FROM->TO	G16_010B	SWISSVALE - WEST GARDNER 345KV CKT 1	717	0.07242	101.4674	HOYT - JEFFREY ENERGY CENTER 345KV CKT 1	
17G	03ALL		0 FROM->TO	G16_010B	SWISSVALE - WEST GARDNER 345KV CKT 1	717	0.07234	101.7293	HOYT - JEFFREY ENERGY CENTER 345KV CKT 1	
17SP	03ALL		0 FROM->TO	G16_010B	SWISSVALE - WEST GARDNER 345KV CKT 1	714.4	0.07207	115.8747	HOYT - JEFFREY ENERGY CENTER 345KV CKT 1	
17SP	08ALL		0 FROM->TO	G16_010A	SWISSVALE - WEST GARDNER 345KV CKT 1	714.2	0.07199	126.683	HOYT - JEFFREY ENERGY CENTER 345KV CKT 1	
17SP	03ALL		4 FROM->TO	G16_010B	SWISSVALE - WEST GARDNER 345KV CKT 1	714.4	0.07194	115.7487	HOYT - JEFFREY ENERGY CENTER 345KV CKT 1	
17G	03ALL		3 FROM->TO	G16_010B	SWISSVALE - WEST GARDNER 345KV CKT 1	717	0.07189	101.4287	HOYT - JEFFREY ENERGY CENTER 345KV CKT 1	
17G	03ALL		4 FROM->TO	G16_010B	SWISSVALE - WEST GARDNER 345KV CKT 1	717	0.07129	101.3872	HOYT - JEFFREY ENERGY CENTER 345KV CKT 1	
17G	08ALL		0 FROM->TO	G16_010A	SWISSVALE - WEST GARDNER 345KV CKT 1	716.9	0.07077	115.7192	HOYT - JEFFREY ENERGY CENTER 345KV CKT 1	
25SP	08ALL		0 FROM->TO	G16_010A	SWISSVALE - WEST GARDNER 345KV CKT 1	715.4	0.07065	104.2467	HOYT - JEFFREY ENERGY CENTER 345KV CKT 1	
20SP	03ALL		0 FROM->TO	G16_010B	SWISSVALE - WEST GARDNER 345KV CKT 1	715.1	0.06986	103.5185	HOYT - JEFFREY ENERGY CENTER 345KV CKT 1	
20SP	08ALL		0 FROM->TO	G16_010A	SWISSVALE - WEST GARDNER 345KV CKT 1	714.8	0.06977	116.3974	HOYT - JEFFREY ENERGY CENTER 345KV CKT 1	
20SP	03ALL		3 FROM->TO	G16_010B	SWISSVALE - WEST GARDNER 345KV CKT 1	715.1	0.06956	103.4977	HOYT - JEFFREY ENERGY CENTER 345KV CKT 1	
20SP	03ALL		4 FROM->TO	G16_010B	SWISSVALE - WEST GARDNER 345KV CKT 1	715.1	0.06905	103.4715	HOYT - JEFFREY ENERGY CENTER 345KV CKT 1	
17SP	08ALL		0 FROM->TO	G16_010A	SWISSVALE - WEST GARDNER 345KV CKT 1	714.2	0.06144	105.109	LACYGNE - WEST GARDNER 345KV CKT 1	
17SP	08ALL		0 FROM->TO	G16_010A	SWISSVALE - WEST GARDNER 345KV CKT 1	714.2	0.05898	101.2675	G15063_1 345.00 - G15063_T 345.00 345KV CKT 1	
17SP	08ALL		0 FROM->TO	G16_010A	SWISSVALE - WEST GARDNER 345KV CKT 1	714.2	0.05898	100.0634	WOODRING (WOODRNG2) 345/138/13.8KV TRANSFORMER CKT 1	
17SP	08ALL		0 FROM->TO	G16_010A	SWISSVALE - WEST GARDNER 345KV CKT 1	714.2	0.05657	100.8035	87th STREET - STRANGER CREEK 345KV CKT 1	
16WP	08ALL		0 FROM->TO	G16_033	SWISSVALE - WEST GARDNER 345KV CKT 1	715.5	0.043	111.1203	G16-012-TAP 345.00 - WAVERLY7 345.00 345KV CKT 1	
16WP	08ALL		0 FROM->TO	G16_033	SWISSVALE - WEST GARDNER 345KV CKT 1	715.5	0.043	117.2382	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	
16WP	08ALL		0 FROM->TO	G16_033	SWISSVALE - WEST GARDNER 345KV CKT 1	715.5	0.043	104.7891	WAVERLY7 345.00 - WOLF CREEK 345KV CKT 1	
20WP	08ALL		0 FROM->TO	G16_033	SWISSVALE - WEST GARDNER 345KV CKT 1	715.4	0.04103	113.4461	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	
20WP	08ALL		0 FROM->TO	G16_033	SWISSVALE - WEST GARDNER 345KV CKT 1	715.4	0.04103	107.3283	G16-012-TAP 345.00 - WAVERLY7 345.00 345KV CKT 1	
20WP	08ALL		0 FROM->TO	G16_033	SWISSVALE - WEST GARDNER 345KV CKT 1	715.4	0.04103	101.0241	WAVERLY7 345.00 - WOLF CREEK 345KV CKT 1	
20L	08ALL		0 FROM->TO	G16_033	SWISSVALE - WEST GARDNER 345KV CKT 1	716.2	0.04033	111.2265	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	
20L	08ALL		0 FROM->TO	G16_033	SWISSVALE - WEST GARDNER 345KV CKT 1	716.2	0.04033	105.1823	G16-012-TAP 345.00 - WAVERLY7 345.00 345KV CKT 1	
16WP	08ALL		0 FROM->TO	G16_033	SWISSVALE - WEST GARDNER 345KV CKT 1	715.5	0.03895	115.3945	HOYT - STRANGER CREEK 345KV CKT 1	
25SP	08ALL		0 FROM->TO	G16_033	SWISSVALE - WEST GARDNER 345KV CKT 1	715.4	0.03871	102.1885	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	
20SP	08ALL		0 FROM->TO	G16_033	SWISSVALE - WEST GARDNER 345KV CKT 1	714.8	0.03779	115.095	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	
20SP	08ALL		0 FROM->TO	G16_033	SWISSVALE - WEST GARDNER 345KV CKT 1	714.8	0.03779	108.8711	G16-012-TAP 345.00 - WAVERLY7 345.00 345KV CKT 1	
20SP	08ALL		0 FROM->TO	G16_033	SWISSVALE - WEST GARDNER 345KV CKT 1	714.8	0.03779	102.5337	WAVERLY7 345.00 - WOLF CREEK 345KV CKT 1	
17SP	08ALL		0 FROM->TO	G16_033	SWISSVALE - WEST GARDNER 345KV CKT 1	714.2	0.03759	118.9088	G16-012-TAP 345.00 - WAVERLY7 345.00 345KV CKT 1	
17SP	08ALL		0 FROM->TO	G16_033	SWISSVALE - WEST GARDNER 345KV CKT 1	714.2	0.03759	125.1358	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	
17SP	08ALL		0 FROM->TO	G16_033	SWISSVALE - WEST GARDNER 345KV CKT 1	714.2	0.03759	112.5521	WAVERLY7 345.00 - WOLF CREEK 345KV CKT 1	
17G	08ALL		0 FROM->TO	G16_033	SWISSVALE - WEST GARDNER 345KV CKT 1	716.9	0.03715	113.3764	G16-012-TAP 345.00 - WAVERLY7 345.00 345KV CKT 1	
17G	08ALL		0 FROM->TO	G16_033	SWISSVALE - WEST GARDNER 345KV CKT 1	716.9	0.03715	119.5132	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	
17G	08ALL		0 FROM->TO	G16_033	SWISSVALE - WEST GARDNER 345KV CKT 1	716.9	0.03715	107.0576	WAVERLY7 345.00 - WOLF CREEK 345KV CKT 1	
20WP	08ALL		0 FROM->TO	G16_033	SWISSVALE - WEST GARDNER 345KV CKT 1	715.4	0.03693	110.5857	HOYT - STRANGER CREEK 345KV CKT 1	
16WP	08ALL		0 FROM->TO	G16_033	SWISSVALE - WEST GARDNER 345KV CKT 1	715.5	0.03598	111.8914	HOYT - JEFFREY ENERGY CENTER 345KV CKT 1	
25SP	08ALL		0 FROM->TO	G16_033	SWISSVALE - WEST GARDNER 345KV CKT 1	715.4	0.03411	104.9943	HOYT - STRANGER CREEK 345KV CKT 1	
20WP	08ALL		0 FROM->TO	G16_033	SWISSVALE - WEST GARDNER 345KV CKT 1	715.4	0.03389	107.3488	HOYT - JEFFREY ENERGY CENTER 345KV CKT 1	
20SP	08ALL		0 FROM->TO	G16_033	SWISSVALE - WEST GARDNER 345KV CKT 1	714.8	0.03311	118.6487	HOYT - STRANGER CREEK 345KV CKT 1	
17SP	08ALL		0 FROM->TO	G16_033	SWISSVALE - WEST GARDNER 345KV CKT 1	714.2	0.03257	129.9497	HOYT - STRANGER CREEK 345KV CKT 1	
25SP	08ALL		0 FROM->TO	G16_033	SWISSVALE - WEST GARDNER 345KV CKT 1	715.4	0.03145	104.2467	HOYT - JEFFREY ENERGY CENTER 345KV CKT 1	
17G	08ALL		0 FROM->TO	G16_033	SWISSVALE - WEST GARDNER 345KV CKT 1	716.9	0.03103	119.8984	HOYT - STRANGER CREEK 345KV CKT 1	
20SP	08ALL		0 FROM->TO	G16_033	SWISSVALE - WEST GARDNER 345KV CKT 1	714.8	0.03057	116.3974	HOYT - JEFFREY ENERGY CENTER 345KV CKT 1	
17SP	08ALL		0 FROM->TO	G16_033	SWISSVALE - WEST GARDNER 345KV CKT 1	714.2	0.03018	126.683	HOYT - JEFFREY ENERGY CENTER 345KV CKT 1	
25SP	00_1		0 FROM->TO	G16_018	TUCO INTERCHANGE (GE M1022338) 345/230/13.2KV TRANSFORMER CKT 1	640.4	0.03269	106.8219	P13:230-345:SPS:TUCO_INT.2	
25SP	00_1		0 FROM->TO	G16_018	TUCO INTERCHANGE (GE M1022338) 345/230/13.2KV TRANSFORMER CKT 1	642.6	0.03269	106.5028	P13:230-345:SPS:TUCO_INT.2	
25SP	00_1		2 FROM->TO	G16_018	TUCO INTERCHANGE (GE M1022338) 345/230/13.2KV TRANSFORMER CKT 1	640.4	0.03269	106.8219	P13:230-345:SPS:TUCO_INT.2	
25SP	00_1		2 FROM->TO	G16_018	TUCO INTERCHANGE (GE M1022338) 345/230/13.2KV TRANSFORMER CKT 1	642.6	0.03269	106.5028	P13:230-345:SPS:TUCO_INT.2	

SEASON	GROUP	SCENARIO	DIRECTION	SOURCE	MONITORED ELEMENT	RATE		CONTINGENCY		CONTINGENCY
						(MVA)	TDF	LOADING %		
25SP	00_2	0	FROM->TO	G16_019	TUCO INTERCHANGE (GE M1022338) 345/230/13.2KV TRANSFORMER CKT 1	640.4	0.03269	108.567	P13:230-345:SPS:TUCO_INT.2	
25SP	00_2	0	FROM->TO	G16_019	TUCO INTERCHANGE (GE M1022338) 345/230/13.2KV TRANSFORMER CKT 1	642.6	0.03269	108.242	P13:230-345:SPS:TUCO_INT.2	
25SP	00_2	2	FROM->TO	G16_019	TUCO INTERCHANGE (GE M1022338) 345/230/13.2KV TRANSFORMER CKT 1	640.4	0.03269	108.567	P13:230-345:SPS:TUCO_INT.2	
25SP	00_2	2	FROM->TO	G16_019	TUCO INTERCHANGE (GE M1022338) 345/230/13.2KV TRANSFORMER CKT 1	642.6	0.03269	108.242	P13:230-345:SPS:TUCO_INT.2	
25SP	00_1	0	FROM->TO	G16_018	TUCO INTERCHANGE (GE M1022338) 345/230/13.2KV TRANSFORMER CKT 1	640.4	0.03269	106.8219	TUCO INTERCHANGE (SIEM 8743066) 345/230/13.2KV TRANSFORMER CKT 2	
25SP	00_1	0	FROM->TO	G16_018	TUCO INTERCHANGE (GE M1022338) 345/230/13.2KV TRANSFORMER CKT 1	642.6	0.03269	106.5028	TUCO INTERCHANGE (SIEM 8743066) 345/230/13.2KV TRANSFORMER CKT 2	
25SP	00_1	2	FROM->TO	G16_018	TUCO INTERCHANGE (GE M1022338) 345/230/13.2KV TRANSFORMER CKT 1	640.4	0.03269	106.8219	TUCO INTERCHANGE (SIEM 8743066) 345/230/13.2KV TRANSFORMER CKT 2	
25SP	00_1	2	FROM->TO	G16_018	TUCO INTERCHANGE (GE M1022338) 345/230/13.2KV TRANSFORMER CKT 1	642.6	0.03269	106.5028	TUCO INTERCHANGE (SIEM 8743066) 345/230/13.2KV TRANSFORMER CKT 2	
25SP	00_2	0	FROM->TO	G16_019	TUCO INTERCHANGE (GE M1022338) 345/230/13.2KV TRANSFORMER CKT 1	640.4	0.03269	108.567	TUCO INTERCHANGE (SIEM 8743066) 345/230/13.2KV TRANSFORMER CKT 2	
25SP	00_2	0	FROM->TO	G16_019	TUCO INTERCHANGE (GE M1022338) 345/230/13.2KV TRANSFORMER CKT 1	642.6	0.03269	108.242	TUCO INTERCHANGE (SIEM 8743066) 345/230/13.2KV TRANSFORMER CKT 2	
25SP	00_2	2	FROM->TO	G16_019	TUCO INTERCHANGE (GE M1022338) 345/230/13.2KV TRANSFORMER CKT 1	640.4	0.03269	108.567	TUCO INTERCHANGE (SIEM 8743066) 345/230/13.2KV TRANSFORMER CKT 2	
25SP	00_2	2	FROM->TO	G16_019	TUCO INTERCHANGE (GE M1022338) 345/230/13.2KV TRANSFORMER CKT 1	642.6	0.03269	108.242	TUCO INTERCHANGE (SIEM 8743066) 345/230/13.2KV TRANSFORMER CKT 2	
17SP	08ALL	0	FROM->TO	G16_033	TUCO INTERCHANGE (GE M1022338) 345/230/13.2KV TRANSFORMER CKT 1	642.3	0.03235	128.4615	P13:230-345:SPS:TUCO_INT.2	
17SP	08ALL	0	FROM->TO	G16_033	TUCO INTERCHANGE (GE M1022338) 345/230/13.2KV TRANSFORMER CKT 1	643.8	0.03235	128.2243	P13:230-345:SPS:TUCO_INT.2	
17SP	08ALL	0	FROM->TO	G16_033	TUCO INTERCHANGE (GE M1022338) 345/230/13.2KV TRANSFORMER CKT 1	642.3	0.03235	128.4615	TUCO INTERCHANGE (SIEM 8743066) 345/230/13.2KV TRANSFORMER CKT 2	
17SP	08ALL	0	FROM->TO	G16_033	TUCO INTERCHANGE (GE M1022338) 345/230/13.2KV TRANSFORMER CKT 1	643.8	0.03235	128.2243	TUCO INTERCHANGE (SIEM 8743066) 345/230/13.2KV TRANSFORMER CKT 2	
17G	08ALL	0	FROM->TO	G16_033	TUCO INTERCHANGE (GE M1022338) 345/230/13.2KV TRANSFORMER CKT 1	641.4	0.03073	109.239	P13:230-345:SPS:TUCO_INT.2	
17G	08ALL	0	FROM->TO	G16_033	TUCO INTERCHANGE (GE M1022338) 345/230/13.2KV TRANSFORMER CKT 1	643	0.03073	108.9982	P13:230-345:SPS:TUCO_INT.2	
17G	08ALL	0	FROM->TO	G16_033	TUCO INTERCHANGE (GE M1022338) 345/230/13.2KV TRANSFORMER CKT 1	641.4	0.03073	109.239	TUCO INTERCHANGE (SIEM 8743066) 345/230/13.2KV TRANSFORMER CKT 2	
17G	08ALL	0	FROM->TO	G16_033	TUCO INTERCHANGE (GE M1022338) 345/230/13.2KV TRANSFORMER CKT 1	643	0.03073	108.9982	TUCO INTERCHANGE (SIEM 8743066) 345/230/13.2KV TRANSFORMER CKT 2	
25SP	00_1	0	FROM->TO	G16_018	TUCO INTERCHANGE (SIEM 8743066) 345/230/13.2KV TRANSFORMER CKT 2	640.4	0.03269	106.8219	P13:230-345:SPS:TUCO_INT.1	
25SP	00_1	0	FROM->TO	G16_018	TUCO INTERCHANGE (SIEM 8743066) 345/230/13.2KV TRANSFORMER CKT 2	642.6	0.03269	106.5028	P13:230-345:SPS:TUCO_INT.1	
25SP	00_1	2	FROM->TO	G16_018	TUCO INTERCHANGE (SIEM 8743066) 345/230/13.2KV TRANSFORMER CKT 2	640.4	0.03269	106.8219	P13:230-345:SPS:TUCO_INT.1	
25SP	00_1	2	FROM->TO	G16_018	TUCO INTERCHANGE (SIEM 8743066) 345/230/13.2KV TRANSFORMER CKT 2	642.6	0.03269	106.5028	P13:230-345:SPS:TUCO_INT.1	
25SP	00_2	0	FROM->TO	G16_019	TUCO INTERCHANGE (SIEM 8743066) 345/230/13.2KV TRANSFORMER CKT 2	640.4	0.03269	108.567	P13:230-345:SPS:TUCO_INT.1	
25SP	00_2	0	FROM->TO	G16_019	TUCO INTERCHANGE (SIEM 8743066) 345/230/13.2KV TRANSFORMER CKT 2	642.6	0.03269	108.242	P13:230-345:SPS:TUCO_INT.1	
25SP	00_2	2	FROM->TO	G16_019	TUCO INTERCHANGE (SIEM 8743066) 345/230/13.2KV TRANSFORMER CKT 2	640.4	0.03269	108.567	P13:230-345:SPS:TUCO_INT.1	
25SP	00_2	2	FROM->TO	G16_019	TUCO INTERCHANGE (SIEM 8743066) 345/230/13.2KV TRANSFORMER CKT 2	642.6	0.03269	108.242	P13:230-345:SPS:TUCO_INT.1	
25SP	00_1	0	FROM->TO	G16_018	TUCO INTERCHANGE (SIEM 8743066) 345/230/13.2KV TRANSFORMER CKT 2	640.4	0.03269	106.8219	TUCO INTERCHANGE (GE M1022338) 345/230/13.2KV TRANSFORMER CKT 1	
25SP	00_1	0	FROM->TO	G16_018	TUCO INTERCHANGE (SIEM 8743066) 345/230/13.2KV TRANSFORMER CKT 2	642.6	0.03269	106.5028	TUCO INTERCHANGE (GE M1022338) 345/230/13.2KV TRANSFORMER CKT 1	
25SP	00_1	2	FROM->TO	G16_018	TUCO INTERCHANGE (SIEM 8743066) 345/230/13.2KV TRANSFORMER CKT 2	640.4	0.03269	106.8219	TUCO INTERCHANGE (GE M1022338) 345/230/13.2KV TRANSFORMER CKT 1	
25SP	00_1	2	FROM->TO	G16_018	TUCO INTERCHANGE (SIEM 8743066) 345/230/13.2KV TRANSFORMER CKT 2	642.6	0.03269	106.5028	TUCO INTERCHANGE (GE M1022338) 345/230/13.2KV TRANSFORMER CKT 1	
25SP	00_2	0	FROM->TO	G16_019	TUCO INTERCHANGE (SIEM 8743066) 345/230/13.2KV TRANSFORMER CKT 2	640.4	0.03269	108.567	TUCO INTERCHANGE (GE M1022338) 345/230/13.2KV TRANSFORMER CKT 1	
25SP	00_2	0	FROM->TO	G16_019	TUCO INTERCHANGE (SIEM 8743066) 345/230/13.2KV TRANSFORMER CKT 2	642.6	0.03269	108.242	TUCO INTERCHANGE (GE M1022338) 345/230/13.2KV TRANSFORMER CKT 1	
25SP	00_2	2	FROM->TO	G16_019	TUCO INTERCHANGE (SIEM 8743066) 345/230/13.2KV TRANSFORMER CKT 2	640.4	0.03269	108.567	TUCO INTERCHANGE (GE M1022338) 345/230/13.2KV TRANSFORMER CKT 1	
25SP	00_2	2	FROM->TO	G16_019	TUCO INTERCHANGE (SIEM 8743066) 345/230/13.2KV TRANSFORMER CKT 2	642.6	0.03269	108.242	TUCO INTERCHANGE (GE M1022338) 345/230/13.2KV TRANSFORMER CKT 1	
17SP	08ALL	0	FROM->TO	G16_033	TUCO INTERCHANGE (SIEM 8743066) 345/230/13.2KV TRANSFORMER CKT 2	642.3	0.03235	128.4615	P13:230-345:SPS:TUCO_INT.1	
17SP	08ALL	0	FROM->TO	G16_033	TUCO INTERCHANGE (SIEM 8743066) 345/230/13.2KV TRANSFORMER CKT 2	643.8	0.03235	128.2243	P13:230-345:SPS:TUCO_INT.1	
17SP	08ALL	0	FROM->TO	G16_033	TUCO INTERCHANGE (SIEM 8743066) 345/230/13.2KV TRANSFORMER CKT 2	642.3	0.03235	128.4615	TUCO INTERCHANGE (GE M1022338) 345/230/13.2KV TRANSFORMER CKT 1	
17SP	08ALL	0	FROM->TO	G16_033	TUCO INTERCHANGE (SIEM 8743066) 345/230/13.2KV TRANSFORMER CKT 2	643.8	0.03235	128.2243	TUCO INTERCHANGE (GE M1022338) 345/230/13.2KV TRANSFORMER CKT 1	
17G	08ALL	0	FROM->TO	G16_033	TUCO INTERCHANGE (SIEM 8743066) 345/230/13.2KV TRANSFORMER CKT 2	641.4	0.03073	109.239	P13:230-345:SPS:TUCO_INT.1	
17G	08ALL	0	FROM->TO	G16_033	TUCO INTERCHANGE (SIEM 8743066) 345/230/13.2KV TRANSFORMER CKT 2	643	0.03073	108.9982	P13:230-345:SPS:TUCO_INT.1	
17G	08ALL	0	FROM->TO	G16_033	TUCO INTERCHANGE (SIEM 8743066) 345/230/13.2KV TRANSFORMER CKT 2	641.4	0.03073	109.239	TUCO INTERCHANGE (GE M1022338) 345/230/13.2KV TRANSFORMER CKT 1	
17G	08ALL	0	FROM->TO	G16_033	TUCO INTERCHANGE (SIEM 8743066) 345/230/13.2KV TRANSFORMER CKT 2	643	0.03073	108.9982	TUCO INTERCHANGE (GE M1022338) 345/230/13.2KV TRANSFORMER CKT 1	
17SP	08ALL	0	FROM->TO	G16_033	VIOLA 7 345.00 - WICHITA 345KV CKT 1	1075.6	0.0791	114.5971	HUNTERS7 345.00 - WOODRING 345KV CKT 1	
16WP	08ALL	0	FROM->TO	G16_033	VIOLA 7 345.00 - WICHITA 345KV CKT 1	1075.2	0.07752	118.2347	HUNTERS7 345.00 - WOODRING 345KV CKT 1	
17G	08ALL	0	FROM->TO	G16_033	VIOLA 7 345.00 - WICHITA 345KV CKT 1	1074.7	0.07595	117.8931	HUNTERS7 345.00 - WOODRING 345KV CKT 1	
25SP	08ALL	0	FROM->TO	G16_033	VIOLA 7 345.00 (VIOLA 1X) 345/138/13.8KV TRANSFORMER CKT 1	492.7	0.0834	111.6806	VIOLA 7 345.00 - WICHITA 345KV CKT 1	
25SP	08ALL	0	FROM->TO	G16_033	VIOLA 7 345.00 (VIOLA 1X) 345/138/13.8KV TRANSFORMER CKT 1	492.7	0.0834	111.5589	VIOLA 7 345.00 - WICHITA 345KV CKT 1	
20SP	08ALL	0	FROM->TO	G16_033	VIOLA 7 345.00 (VIOLA 1X) 345/138/13.8KV TRANSFORMER CKT 1	492.4	0.08303	119.0827	VIOLA 7 345.00 - WICHITA 345KV CKT 1	
20SP	08ALL	0	FROM->TO	G16_033	VIOLA 7 345.00 (VIOLA 1X) 345/138/13.8KV TRANSFORMER CKT 1	492.8	0.08303	118.844	VIOLA 7 345.00 - WICHITA 345KV CKT 1	
20WP	08ALL	0	FROM->TO	G16_033	VIOLA 7 345.00 (VIOLA 1X) 345/138/13.8KV TRANSFORMER CKT 1	491.5	0.08107	113.5284	VIOLA 7 345.00 - WICHITA 345KV CKT 1	
20WP	08ALL	0	FROM->TO	G16_033	VIOLA 7 345.00 (VIOLA 1X) 345/138/13.8KV TRANSFORMER CKT 1	492.5	0.08107	113.1964	VIOLA 7 345.00 - WICHITA 345KV CKT 1	
17SP	16ALL	2	TO->FROM	G16_035	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	788.3	0.14122	109.6377	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	
17SP	16ALL	2	TO->FROM	G16_035	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	788.3	0.14122	109.6377	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	

SEASON	GROUP	SCENARIO	DIRECTION	SOURCE	MONITORED ELEMENT	RATE		CONTINGENCY		CONTINGENCY
						(MVA)	TDF	LOADING %		
17SP	16ALL	2	TO->FROM	G16_035	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	788.3	0.14122	108.9019	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	
17SP	16ALL	2	TO->FROM	G16_035	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	788.3	0.14122	108.8512	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	
17SP	16ALL	2	TO->FROM	G16_035	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	788.3	0.14122	107.7856	FT THOMPSON - FTTHOM2-LNX3345.00 345KV CKT Z	
17SP	16ALL	2	TO->FROM	G16_035	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	788.3	0.14122	107.6207	FTTHOM2-LNX3345.00 - GRPRAR2-LNX3345.00 345KV CKT 1	
17SP	16ALL	2	TO->FROM	G16_035	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	788.3	0.14122	107.6207	GRPRAR2-LNX3345.00 - YANKTON 345KV CKT Z	
17SP	16ALL	0	TO->FROM	G16_035	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	788.3	0.1364	109.6972	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	
17SP	16ALL	0	TO->FROM	G16_035	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	788.3	0.1364	109.6972	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	
17SP	16ALL	0	TO->FROM	G16_035	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	788.3	0.1364	108.9614	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	
17SP	16ALL	0	TO->FROM	G16_035	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	788.3	0.1364	108.898	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	
17SP	16ALL	0	TO->FROM	G16_035	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	788.3	0.1364	107.8197	FT THOMPSON - FTTHOM2-LNX3345.00 345KV CKT Z	
17SP	16ALL	0	TO->FROM	G16_035	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	788.3	0.1364	107.6675	GRPRAR2-LNX3345.00 - YANKTON 345KV CKT Z	
17SP	16ALL	0	TO->FROM	G16_035	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	788.3	0.1364	107.6675	FTTHOM2-LNX3345.00 - GRPRAR2-LNX3345.00 345KV CKT 1	
17SP	16ALL	2	TO->FROM	G16_035	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	788.3	0.13247	116.1387	RIEL - ROSEAU 500KV CKT 1	
17SP	16ALL	2	TO->FROM	G16_035	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	788.3	0.13247	115.7455	ROSEAU - ROSEAU 2 500.00 500KV CKT 1	
17SP	16ALL	2	TO->FROM	G16_035	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	788.3	0.13247	115.7455	ROSEAU - ROSEAU 2 500.00 500KV CKT 1	
17SP	16ALL	2	TO->FROM	G16_035	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	788.3	0.13247	115.3395	FORBES - ROSEAU 500KV CKT 1	
17SP	16ALL	2	TO->FROM	G16_035	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	788.3	0.13117	109.5238	P12:230:UMZW:# 143 #: GF IN MN. GF-FB LINE FAULT	
17SP	16ALL	2	TO->FROM	G16_035	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	788.3	0.13087	107.0183	CHISAGO COUNTY - FORBES 500KV CKT 1	
17SP	16ALL	2	TO->FROM	G16_035	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	788.3	0.13087	106.9041	CHISAGO COUNTY - CHISAGO COUNTY 500KV CKT 1	
17SP	16ALL	0	TO->FROM	G16_035	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	788.3	0.13016	105.2518	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT	
17SP	16ALL	2	TO->FROM	G16_035	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	788.3	0.13016	104.9854	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT	
17SP	16ALL	0	TO->FROM	G16_035	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	788.3	0.13016	105.0615	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z	
17SP	16ALL	2	TO->FROM	G16_035	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	788.3	0.12995	104.6259	HANLON - STORLA 230KV CKT 1	
17G	16ALL	2	TO->FROM	G16_035	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	791.1	0.12989	101.7839	RIEL - ROSEAU 500KV CKT 1	
17G	16ALL	2	TO->FROM	G16_035	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	791.1	0.12989	101.5184	ROSEAU - ROSEAU 2 500.00 500KV CKT 1	
17G	16ALL	2	TO->FROM	G16_035	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	791.1	0.12989	101.5184	ROSEAU - ROSEAU 2 500.00 500KV CKT 1	
17G	16ALL	2	TO->FROM	G16_035	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	791.1	0.12989	101.253	FORBES - ROSEAU 500KV CKT 1	
17SP	16ALL	2	TO->FROM	G16_035	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	788.3	0.12963	106.6897	P12:230:UMZW:# 178 #: WT IN SD. WT-APD LINE FAULT	
17SP	16ALL	2	TO->FROM	G16_035	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	788.3	0.12963	106.2331	P12:230:UMZW:# 142 #: GF IN MN. GF-APD LINE FAULT	
17SP	16ALL	0	TO->FROM	G16_035	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	788.3	0.12892	116.0952	RIEL - ROSEAU 500KV CKT 1	
17SP	16ALL	0	TO->FROM	G16_035	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	788.3	0.12892	115.702	ROSEAU - ROSEAU 2 500.00 500KV CKT 1	
17SP	16ALL	0	TO->FROM	G16_035	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	788.3	0.12892	115.702	ROSEAU - ROSEAU 2 500.00 500KV CKT 1	
17SP	16ALL	0	TO->FROM	G16_035	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	788.3	0.12892	115.296	FORBES - ROSEAU 500KV CKT 1	
17SP	16ALL	0	TO->FROM	G16_035	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	788.3	0.12733	106.9886	CHISAGO COUNTY - FORBES 500KV CKT 1	
17SP	16ALL	0	TO->FROM	G16_035	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	788.3	0.12733	106.8745	CHISAGO COUNTY - CHISAGO COUNTY 500KV CKT 1	
17SP	16ALL	0	TO->FROM	G16_035	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	788.3	0.12709	109.5185	P12:230:UMZW:# 143 #: GF IN MN. GF-FB LINE FAULT	
17G	16ALL	0	TO->FROM	G16_035	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	791.1	0.12634	101.7279	RIEL - ROSEAU 500KV CKT 1	
17G	16ALL	0	TO->FROM	G16_035	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	791.1	0.12634	101.4624	ROSEAU - ROSEAU 2 500.00 500KV CKT 1	
17G	16ALL	0	TO->FROM	G16_035	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	791.1	0.12634	101.4624	ROSEAU - ROSEAU 2 500.00 500KV CKT 1	
17G	16ALL	0	TO->FROM	G16_035	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	791.1	0.12634	101.197	FORBES - ROSEAU 500KV CKT 1	
17SP	16ALL	2	TO->FROM	G16_035	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	788.3	0.12486	106.5909	DEERCREEK 3345.00 (DEERCCK KU1A) 345/18.0/18.0KV TRANSFORMER CKT 1	
17SP	16ALL	2	TO->FROM	G16_035	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	788.3	0.12486	106.5909	DEERCREEK 3345.00 - WHITE 345KV CKT 1	
17SP	16ALL	0	TO->FROM	G16_035	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	788.3	0.12482	106.679	P12:230:UMZW:# 178 #: WT IN SD. WT-APD LINE FAULT	
17SP	16ALL	0	TO->FROM	G16_035	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	788.3	0.12482	106.2223	P12:230:UMZW:# 142 #: GF IN MN. GF-APD LINE FAULT	
17SP	16ALL	0	TO->FROM	G16_035	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	788.3	0.12099	106.5786	DEERCREEK 3345.00 (DEERCCK KU1A) 345/18.0/18.0KV TRANSFORMER CKT 1	
17SP	16ALL	0	TO->FROM	G16_035	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	788.3	0.12099	106.5786	DEERCREEK 3345.00 - WHITE 345KV CKT 1	
17SP	16ALL	2	FROM->TO	G16_035	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	781.9	0.14122	110.535	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	
17SP	16ALL	2	FROM->TO	G16_035	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	781.9	0.14122	110.535	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	
17SP	16ALL	2	FROM->TO	G16_035	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	781.9	0.14122	109.7933	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	
17SP	16ALL	2	FROM->TO	G16_035	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	781.9	0.14122	109.7421	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	
17SP	16ALL	2	FROM->TO	G16_035	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	781.9	0.14122	108.6678	FT THOMPSON - FTTHOM2-LNX3345.00 345KV CKT Z	
17SP	16ALL	2	FROM->TO	G16_035	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	781.9	0.14122	108.5016	GRPRAR2-LNX3345.00 - YANKTON 345KV CKT Z	
17SP	16ALL	2	FROM->TO	G16_035	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	781.9	0.14122	108.5016	FTTHOM2-LNX3345.00 - GRPRAR2-LNX3345.00 345KV CKT 1	
17SP	16ALL	0	FROM->TO	G16_035	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	781.9	0.1364	110.5951	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	
17SP	16ALL	0	FROM->TO	G16_035	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	781.9	0.1364	110.5951	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	

SEASON	GROUP	SCENARIO	DIRECTION	SOURCE	MONITORED ELEMENT	RATE		CONTINGENCY		CONTINGENCY
						(MVA)	TDF	LOADING %		
17SP	16ALL	0	FROM->TO	G16_035	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	781.9	0.1364	109.8533	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	
17SP	16ALL	0	FROM->TO	G16_035	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	781.9	0.1364	109.7893	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	
17SP	16ALL	0	FROM->TO	G16_035	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	781.9	0.1364	108.7022	FT THOMPSON - FTTHOM2-LNX3345.00 345KV CKT Z	
17SP	16ALL	0	FROM->TO	G16_035	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	781.9	0.1364	108.5488	GRPRAR2-LNX3345.00 - YANKTON 345KV CKT Z	
17SP	16ALL	0	FROM->TO	G16_035	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	781.9	0.1364	108.5488	FTTHOM2-LNX3345.00 - GRPRAR2-LNX3345.00 345KV CKT 1	
17SP	16ALL	2	FROM->TO	G16_035	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	781.9	0.13247	117.0893	RIEL - ROSEAU 500KV CKT 1	
17SP	16ALL	2	FROM->TO	G16_035	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	781.9	0.13247	116.6929	ROSEAU - ROSEAUM 2 500.00 500KV CKT 1	
17SP	16ALL	2	FROM->TO	G16_035	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	781.9	0.13247	116.6929	ROSEAU - ROSEAUM 2 500.00 500KV CKT 1	
17SP	16ALL	2	FROM->TO	G16_035	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	781.9	0.13247	116.2836	FORBES - ROSEAU 500KV CKT 1	
17SP	16ALL	2	FROM->TO	G16_035	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	781.9	0.13117	110.4202	P12:230:UMZW:# 143 #: GF IN MN. GF-FB LINE FAULT	
17SP	16ALL	2	FROM->TO	G16_035	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	781.9	0.13087	107.8943	CHISAGO COUNTY - FORBES 500KV CKT 1	
17SP	16ALL	2	FROM->TO	G16_035	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	781.9	0.13087	107.7791	CHISAGO COUNTY - CHISAGO COUNTY 500KV CKT 1	
17SP	16ALL	0	FROM->TO	G16_035	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	781.9	0.13016	106.1133	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT	
17SP	16ALL	2	FROM->TO	G16_035	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	781.9	0.13016	105.8447	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT	
17SP	16ALL	0	FROM->TO	G16_035	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	781.9	0.13016	105.9214	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z	
17SP	16ALL	2	FROM->TO	G16_035	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	781.9	0.12995	105.4823	HANLON - STORLA 230KV CKT 1	
17G	16ALL	2	FROM->TO	G16_035	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	787	0.12989	102.3141	RIEL - ROSEAU 500KV CKT 1	
17G	16ALL	2	FROM->TO	G16_035	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	787	0.12989	102.0473	ROSEAU - ROSEAUM 2 500.00 500KV CKT 1	
17G	16ALL	2	FROM->TO	G16_035	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	787	0.12989	102.0473	ROSEAU - ROSEAUM 2 500.00 500KV CKT 1	
17G	16ALL	2	FROM->TO	G16_035	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	787	0.12989	101.7805	FORBES - ROSEAU 500KV CKT 1	
17SP	16ALL	2	FROM->TO	G16_035	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	781.9	0.12963	107.563	P12:230:UMZW:# 178 #: WT IN SD. WT-APD LINE FAULT	
17SP	16ALL	2	FROM->TO	G16_035	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	781.9	0.12963	107.1026	P12:230:UMZW:# 142 #: GF IN MN. GF-APD LINE FAULT	
17SP	16ALL	0	FROM->TO	G16_035	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	781.9	0.12892	117.0455	RIEL - ROSEAU 500KV CKT 1	
17SP	16ALL	0	FROM->TO	G16_035	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	781.9	0.12892	116.649	ROSEAU - ROSEAUM 2 500.00 500KV CKT 1	
17SP	16ALL	0	FROM->TO	G16_035	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	781.9	0.12892	116.649	ROSEAU - ROSEAUM 2 500.00 500KV CKT 1	
17SP	16ALL	0	FROM->TO	G16_035	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	781.9	0.12892	116.2397	FORBES - ROSEAU 500KV CKT 1	
17SP	16ALL	0	FROM->TO	G16_035	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	781.9	0.12733	107.8643	CHISAGO COUNTY - FORBES 500KV CKT 1	
17SP	16ALL	0	FROM->TO	G16_035	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	781.9	0.12733	107.7492	CHISAGO COUNTY - CHISAGO COUNTY 500KV CKT 1	
17SP	16ALL	0	FROM->TO	G16_035	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	781.9	0.12709	110.415	P12:230:UMZW:# 143 #: GF IN MN. GF-FB LINE FAULT	
17G	16ALL	0	FROM->TO	G16_035	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	787.1	0.12634	102.2449	RIEL - ROSEAU 500KV CKT 1	
17G	16ALL	0	FROM->TO	G16_035	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	787.1	0.12634	101.9781	ROSEAU - ROSEAUM 2 500.00 500KV CKT 1	
17G	16ALL	0	FROM->TO	G16_035	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	787.1	0.12634	101.9781	ROSEAU - ROSEAUM 2 500.00 500KV CKT 1	
17G	16ALL	0	FROM->TO	G16_035	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	787.1	0.12634	101.7113	FORBES - ROSEAU 500KV CKT 1	
17SP	16ALL	2	FROM->TO	G16_035	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	781.9	0.12486	107.4633	DEERCREEK 3345.00 (DEERCCK KU1A) 345/18.0/18.0KV TRANSFORMER CKT 1	
17SP	16ALL	2	FROM->TO	G16_035	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	781.9	0.12486	107.4633	DEERCREEK 3345.00 - WHITE 345KV CKT 1	
17SP	16ALL	0	FROM->TO	G16_035	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	781.9	0.12482	107.5522	P12:230:UMZW:# 178 #: WT IN SD. WT-APD LINE FAULT	
17SP	16ALL	0	FROM->TO	G16_035	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	781.9	0.12482	107.0918	P12:230:UMZW:# 142 #: GF IN MN. GF-APD LINE FAULT	
17SP	16ALL	0	FROM->TO	G16_035	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	781.9	0.12099	107.451	DEERCREEK 3345.00 (DEERCCK KU1A) 345/18.0/18.0KV TRANSFORMER CKT 1	
17SP	16ALL	0	FROM->TO	G16_035	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	781.9	0.12099	107.451	DEERCREEK 3345.00 - WHITE 345KV CKT 1	
17SP	16ALL	2	FROM->TO	G16_035	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	497.7	0.07086	109.0567	P12:345:UMZW:# 1747 #: WT2 IN SD. WT2-WHT LINE FAULT	
17SP	16ALL	2	FROM->TO	G16_035	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	497.9	0.07086	109.033	P12:345:UMZW:# 1747 #: WT2 IN SD. WT2-WHT LINE FAULT	
17SP	16ALL	2	FROM->TO	G16_035	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	497.7	0.07086	109.0567	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	
17SP	16ALL	2	FROM->TO	G16_035	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	497.7	0.07086	109.0567	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	
17SP	16ALL	2	FROM->TO	G16_035	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	497.9	0.07086	109.033	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	
17SP	16ALL	2	FROM->TO	G16_035	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	497.9	0.07086	109.033	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	
25SP	16ALL	2	FROM->TO	G16_035	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	495	0.06645	105.2814	P12:345:UMZW:# 1747 #: WT2 IN SD. WT2-WHT LINE FAULT	
25SP	16ALL	2	FROM->TO	G16_035	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	495.2	0.06645	105.2388	P12:345:UMZW:# 1747 #: WT2 IN SD. WT2-WHT LINE FAULT	
25SP	16ALL	2	FROM->TO	G16_035	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	495	0.06645	105.2814	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	
25SP	16ALL	2	FROM->TO	G16_035	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	495	0.06645	105.2814	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	
25SP	16ALL	2	FROM->TO	G16_035	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	495.2	0.06645	105.2388	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	
25SP	16ALL	2	FROM->TO	G16_035	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	495.2	0.06645	105.2388	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	
20SP	16ALL	2	FROM->TO	G16_035	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	493.7	0.06613	104.6296	P12:345:UMZW:# 1747 #: WT2 IN SD. WT2-WHT LINE FAULT	
20SP	16ALL	2	FROM->TO	G16_035	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	494	0.06613	104.5661	P12:345:UMZW:# 1747 #: WT2 IN SD. WT2-WHT LINE FAULT	
20SP	16ALL	2	FROM->TO	G16_035	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	493.7	0.06613	104.6296	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	
20SP	16ALL	2	FROM->TO	G16_035	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	493.7	0.06613	104.6296	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	

SEASON	GROUP	SCENARIO	DIRECTION	SOURCE	MONITORED ELEMENT	RATE (MVA)	TDF	CONTINGENCY LOADING %	CONTINGENCY
20SP	16ALL	2	FROM->TO	G16_035	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	494	0.06613	104.5661	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z
20SP	16ALL	2	FROM->TO	G16_035	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	494	0.06613	104.5661	WATERTN-LNX3345.00 - WHITE 345KV CKT 1
17SP	16ALL	0	FROM->TO	G16_035	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	497.7	0.06592	109.0982	P12:345:UMZW:# 1747 #: WT2 IN SD. WT2-WHT LINE FAULT
17SP	16ALL	0	FROM->TO	G16_035	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	497.9	0.06592	109.0745	P12:345:UMZW:# 1747 #: WT2 IN SD. WT2-WHT LINE FAULT
17SP	16ALL	0	FROM->TO	G16_035	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	497.7	0.06592	109.0982	WATERTN-LNX3345.00 - WHITE 345KV CKT 1
17SP	16ALL	0	FROM->TO	G16_035	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	497.7	0.06592	109.0982	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z
17SP	16ALL	0	FROM->TO	G16_035	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	497.9	0.06592	109.0745	WATERTN-LNX3345.00 - WHITE 345KV CKT 1
17SP	16ALL	0	FROM->TO	G16_035	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	497.9	0.06592	109.0745	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z
25SP	16ALL	0	FROM->TO	G16_035	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	494.9	0.06108	105.3115	P12:345:UMZW:# 1747 #: WT2 IN SD. WT2-WHT LINE FAULT
25SP	16ALL	0	FROM->TO	G16_035	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	495.1	0.06108	105.2892	P12:345:UMZW:# 1747 #: WT2 IN SD. WT2-WHT LINE FAULT
25SP	16ALL	0	FROM->TO	G16_035	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	494.9	0.06108	105.3115	WATERTN-LNX3345.00 - WHITE 345KV CKT 1
25SP	16ALL	0	FROM->TO	G16_035	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	494.9	0.06108	105.3115	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z
25SP	16ALL	0	FROM->TO	G16_035	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	495.1	0.06108	105.2892	WATERTN-LNX3345.00 - WHITE 345KV CKT 1
25SP	16ALL	0	FROM->TO	G16_035	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	495.1	0.06108	105.2892	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z
20SP	16ALL	0	FROM->TO	G16_035	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	493.7	0.06076	104.6587	P12:345:UMZW:# 1747 #: WT2 IN SD. WT2-WHT LINE FAULT
20SP	16ALL	0	FROM->TO	G16_035	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	493.9	0.06076	104.6164	P12:345:UMZW:# 1747 #: WT2 IN SD. WT2-WHT LINE FAULT
20SP	16ALL	0	FROM->TO	G16_035	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	493.7	0.06076	104.6587	WATERTN-LNX3345.00 - WHITE 345KV CKT 1
20SP	16ALL	0	FROM->TO	G16_035	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	493.7	0.06076	104.6587	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z
20SP	16ALL	0	FROM->TO	G16_035	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	493.9	0.06076	104.6164	WATERTN-LNX3345.00 - WHITE 345KV CKT 1
20SP	16ALL	0	FROM->TO	G16_035	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	493.9	0.06076	104.6164	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z
17SP	08ALL	0	FROM->TO	G16_010A	WOODRING (WOODRNG2) 345/138/13.8KV TRANSFORMER CKT 1	360	0.07014	108.8484	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1
17SP	08ALL	0	FROM->TO	G16_010A	WOODRING (WOODRNG2) 345/138/13.8KV TRANSFORMER CKT 1	359.8	0.07014	108.7699	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1
20SP	08ALL	0	FROM->TO	G16_010A	WOODRING (WOODRNG2) 345/138/13.8KV TRANSFORMER CKT 1	359.9	0.06204	105.1559	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1
20SP	08ALL	0	FROM->TO	G16_010A	WOODRING (WOODRNG2) 345/138/13.8KV TRANSFORMER CKT 1	360	0.06204	104.9878	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1
25SP	08ALL	0	FROM->TO	G16_010A	WOODRING (WOODRNG2) 345/138/13.8KV TRANSFORMER CKT 1	360	0.06169	114.9198	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1
25SP	08ALL	0	FROM->TO	G16_010A	WOODRING (WOODRNG2) 345/138/13.8KV TRANSFORMER CKT 1	359.6	0.06169	114.9086	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1

10.9H-AS: FCITC Analysis Affected System Constraints for Potential Upgrades

See next page.

Source Key

- G16_006 – GEN-2016-006
- G16_010A – GEN-2016-010 @ Viola
- G16_010B – GEN-2016-010 @ Harper
- G16_018 – GEN-2016-018
- G16_019 – GEN-2016-019
- G16_026A – GEN-2016-026 @ Callaway
- G16_026B – GEN-2016-026 @ Broken Bow
- G16_033 – GEN-2016-033
- G16_035 – GEN-2016-035
- G16_036 – GEN-2016-036

SEASON	GROUP	SCENARIO	DIRECTION	SOURCE	MONITORED ELEMENT	RATE		CONTINGENCY		CONTINGENCY
						(MVA)	TDF	LOADING %		
20SP	08ALL	0	TO->FROM	G16_010A	CLEAVELAND - CLEVIND 4 138.00 138KV CKT Z1	353.6	0.03567	150.3116	P12:345:AEPW-GRDA:T.NO.-7:CLEVLND7	
17SP	08ALL	0	TO->FROM	G16_010A	CLEAVELAND - CLEVIND 4 138.00 138KV CKT Z1	354.1	0.03763	149.9162	P12:345:AEPW-GRDA:T.NO.-7:CLEVLND7	
25SP	08ALL	0	TO->FROM	G16_010A	CLEAVELAND - CLEVIND 4 138.00 138KV CKT Z1	352.8	0.03657	134.6987	P12:345:AEPW-GRDA:T.NO.-7:CLEVLND7	
17G	08ALL	0	TO->FROM	G16_010A	CLEAVELAND - CLEVIND 4 138.00 138KV CKT Z1	365.6	0.03858	134.6485	P12:345:AEPW-GRDA:T.NO.-7:CLEVLND7	
20WP	08ALL	0	TO->FROM	G16_010A	CLEAVELAND - CLEVIND 4 138.00 138KV CKT Z1	412.5	0.03585	122.9782	P12:345:AEPW-GRDA:T.NO.-7:CLEVLND7	
16WP	08ALL	0	TO->FROM	G16_010A	CLEAVELAND - CLEVIND 4 138.00 138KV CKT Z1	412.9	0.03905	118.8605	P12:345:AEPW-GRDA:T.NO.-7:CLEVLND7	
20SP	08ALL	0	TO->FROM	G16_033	CLEAVELAND - CLEVIND 4 138.00 138KV CKT Z1	353.6	0.03619	150.3116	P12:345:AEPW-GRDA:T.NO.-7:CLEVLND7	
17SP	08ALL	0	TO->FROM	G16_033	CLEAVELAND - CLEVIND 4 138.00 138KV CKT Z1	354.1	0.03712	149.9162	P12:345:AEPW-GRDA:T.NO.-7:CLEVLND7	
25SP	08ALL	0	TO->FROM	G16_033	CLEAVELAND - CLEVIND 4 138.00 138KV CKT Z1	352.8	0.03709	134.6987	P12:345:AEPW-GRDA:T.NO.-7:CLEVLND7	
17G	08ALL	0	TO->FROM	G16_033	CLEAVELAND - CLEVIND 4 138.00 138KV CKT Z1	365.6	0.03808	134.6485	P12:345:AEPW-GRDA:T.NO.-7:CLEVLND7	
20WP	08ALL	0	TO->FROM	G16_033	CLEAVELAND - CLEVIND 4 138.00 138KV CKT Z1	412.5	0.03637	122.9782	P12:345:AEPW-GRDA:T.NO.-7:CLEVLND7	
16WP	08ALL	0	TO->FROM	G16_033	CLEAVELAND - CLEVIND 4 138.00 138KV CKT Z1	412.9	0.03855	118.8605	P12:345:AEPW-GRDA:T.NO.-7:CLEVLND7	
25SP	16ALL	0	TO->FROM	G16_035	ARROWHEAD - FORBES 230KV CKT 1	525.6	0.04456	102.2787	CHISAGO COUNTY - FORBES 500KV CKT 1	
17SP	16ALL	0	TO->FROM	G16_035	ARROWHEAD - FORBES 230KV CKT 1	525.7	0.04754	101.6148	CHISAGO COUNTY - FORBES 500KV CKT 1	
25SP	16ALL	0	TO->FROM	G16_035	ARROWHEAD - FORBES 230KV CKT 1	525.6	0.04456	101.6127	CHISAGO COUNTY - CHISAGO COUNTY 500KV CKT 1	
17SP	16ALL	0	TO->FROM	G16_035	ARROWHEAD - FORBES 230KV CKT 1	525.7	0.04754	100.8729	CHISAGO COUNTY - CHISAGO COUNTY 500KV CKT 1	
17SP	16ALL	0	TO->FROM	G16_035	AUDUBON - SHEYNE 230KV CKT 1	278.7	0.05791	113.0923	ALEXMRES3 345.00 - BISON 3 345.00 345KV CKT 1	
17SP	16ALL	0	TO->FROM	G16_035	AUDUBON - SHEYNE 230KV CKT 1	278.7	0.04474	112.7525	RIEL - ROSEAU 500KV CKT 1	
17SP	16ALL	0	TO->FROM	G16_035	AUDUBON - SHEYNE 230KV CKT 1	278.7	0.04474	112.0708	ROSEAU - ROSEAU 2 500.00 500KV CKT 1	
17SP	16ALL	0	TO->FROM	G16_035	AUDUBON - SHEYNE 230KV CKT 1	278.7	0.04474	112.0708	ROSEAU - ROSEAU 2 500.00 500KV CKT 1	
17SP	16ALL	0	TO->FROM	G16_035	AUDUBON - SHEYNE 230KV CKT 1	278.7	0.04474	111.3891	FORBES - ROSEAU 500KV CKT 1	
25SP	16ALL	0	TO->FROM	G16_035	AUDUBON - SHEYNE 230KV CKT 1	278.3	0.05515	110.5533	ALEXMRES3 345.00 - BISON 3 345.00 345KV CKT 1	
25SP	16ALL	0	TO->FROM	G16_035	AUDUBON - SHEYNE 230KV CKT 1	278.3	0.04281	109.8574	RIEL - ROSEAU 500KV CKT 1	
25SP	16ALL	0	TO->FROM	G16_035	AUDUBON - SHEYNE 230KV CKT 1	278.3	0.04281	109.2465	ROSEAU - ROSEAU 2 500.00 500KV CKT 1	
25SP	16ALL	0	TO->FROM	G16_035	AUDUBON - SHEYNE 230KV CKT 1	278.3	0.04281	109.2465	ROSEAU - ROSEAU 2 500.00 500KV CKT 1	
20SP	16ALL	0	TO->FROM	G16_035	AUDUBON - SHEYNE 230KV CKT 1	278.7	0.04258	109.0908	RIEL - ROSEAU 500KV CKT 1	
25SP	16ALL	0	TO->FROM	G16_035	AUDUBON - SHEYNE 230KV CKT 1	278.3	0.04281	108.5997	FORBES - ROSEAU 500KV CKT 1	
20SP	16ALL	0	TO->FROM	G16_035	AUDUBON - SHEYNE 230KV CKT 1	278.7	0.05491	108.5267	ALEXMRES3 345.00 - BISON 3 345.00 345KV CKT 1	
20SP	16ALL	0	TO->FROM	G16_035	AUDUBON - SHEYNE 230KV CKT 1	278.7	0.04258	108.445	ROSEAU - ROSEAU 2 500.00 500KV CKT 1	
20SP	16ALL	0	TO->FROM	G16_035	AUDUBON - SHEYNE 230KV CKT 1	278.7	0.04258	108.445	ROSEAU - ROSEAU 2 500.00 500KV CKT 1	
20SP	16ALL	0	TO->FROM	G16_035	AUDUBON - SHEYNE 230KV CKT 1	278.7	0.04258	107.7991	FORBES - ROSEAU 500KV CKT 1	
17G	16ALL	0	TO->FROM	G16_035	AUDUBON - SHEYNE 230KV CKT 1	278	0.05753	107.1659	ALEXMRES3 345.00 - BISON 3 345.00 345KV CKT 1	
17G	16ALL	0	TO->FROM	G16_035	AUDUBON - SHEYNE 230KV CKT 1	278	0.04448	104.7809	RIEL - ROSEAU 500KV CKT 1	
17G	16ALL	0	TO->FROM	G16_035	AUDUBON - SHEYNE 230KV CKT 1	278	0.04448	104.3492	ROSEAU - ROSEAU 2 500.00 500KV CKT 1	
17G	16ALL	0	TO->FROM	G16_035	AUDUBON - SHEYNE 230KV CKT 1	278	0.04448	104.3492	ROSEAU - ROSEAU 2 500.00 500KV CKT 1	
17G	16ALL	0	TO->FROM	G16_035	AUDUBON - SHEYNE 230KV CKT 1	278	0.04448	103.8816	FORBES - ROSEAU 500KV CKT 1	
17SP	16ALL	0	TO->FROM	G16_035	AUDUBON - SHEYNE 230KV CKT 1	278.7	0.04657	101.8514	FERGSFL4 230.00 - WAHPETON 230KV CKT 1	
25SP	16ALL	0	TO->FROM	G16_035	BISON 3 345.00 - BUFFALO 345KV CKT 1	779.9	0.0945	106.0862	RIEL - ROSEAU 500KV CKT 1	
25SP	16ALL	0	TO->FROM	G16_035	BISON 3 345.00 - BUFFALO 345KV CKT 1	779.9	0.0945	105.7144	ROSEAU - ROSEAU 2 500.00 500KV CKT 1	
25SP	16ALL	0	TO->FROM	G16_035	BISON 3 345.00 - BUFFALO 345KV CKT 1	779.9	0.0945	105.7144	ROSEAU - ROSEAU 2 500.00 500KV CKT 1	
25SP	16ALL	0	TO->FROM	G16_035	BISON 3 345.00 - BUFFALO 345KV CKT 1	779.9	0.0945	105.3425	FORBES - ROSEAU 500KV CKT 1	
25SP	16ALL	0	TO->FROM	G16_035	BISON 3 345.00 - BUFFALO 345KV CKT 1	779.9	0.09824	103.21	CENTER - CNTSHNT3 345.00 345KV CKT Z1	
25SP	16ALL	0	TO->FROM	G16_035	BISON 3 345.00 - BUFFALO 345KV CKT 1	779.9	0.09824	103.21	CNTSHNT3 345.00 - PRAIRIE3 345.00 345KV CKT 1	
17SP	16ALL	0	TO->FROM	G16_035	BISON 3 345.00 - BUFFALO 345KV CKT 1	784.3	0.09767	102.9755	RIEL - ROSEAU 500KV CKT 1	
20SP	16ALL	0	TO->FROM	G16_035	BISON 3 345.00 - BUFFALO 345KV CKT 1	783.5	0.09443	102.8677	RIEL - ROSEAU 500KV CKT 1	
17SP	16ALL	0	TO->FROM	G16_035	BISON 3 345.00 - BUFFALO 345KV CKT 1	784.3	0.09767	102.5548	ROSEAU - ROSEAU 2 500.00 500KV CKT 1	
17SP	16ALL	0	TO->FROM	G16_035	BISON 3 345.00 - BUFFALO 345KV CKT 1	784.3	0.09767	102.5548	ROSEAU - ROSEAU 2 500.00 500KV CKT 1	
20SP	16ALL	0	TO->FROM	G16_035	BISON 3 345.00 - BUFFALO 345KV CKT 1	783.5	0.09443	102.4592	ROSEAU - ROSEAU 2 500.00 500KV CKT 1	
20SP	16ALL	0	TO->FROM	G16_035	BISON 3 345.00 - BUFFALO 345KV CKT 1	783.5	0.09443	102.4592	ROSEAU - ROSEAU 2 500.00 500KV CKT 1	
17SP	16ALL	0	TO->FROM	G16_035	BISON 3 345.00 - BUFFALO 345KV CKT 1	784.3	0.09767	102.1085	FORBES - ROSEAU 500KV CKT 1	
20SP	16ALL	0	TO->FROM	G16_035	BISON 3 345.00 - BUFFALO 345KV CKT 1	783.5	0.09443	102.038	FORBES - ROSEAU 500KV CKT 1	
25SP	16ALL	0	TO->FROM	G16_035	BUFFALO - JAMESTOWN 345KV CKT 1	705	0.0959	130.0813	RIEL - ROSEAU 500KV CKT 1	
25SP	16ALL	0	TO->FROM	G16_035	BUFFALO - JAMESTOWN 345KV CKT 1	705	0.0959	129.6699	ROSEAU - ROSEAU 2 500.00 500KV CKT 1	
25SP	16ALL	0	TO->FROM	G16_035	BUFFALO - JAMESTOWN 345KV CKT 1	705	0.0959	129.6699	ROSEAU - ROSEAU 2 500.00 500KV CKT 1	
25SP	16ALL	0	TO->FROM	G16_035	BUFFALO - JAMESTOWN 345KV CKT 1	705	0.0959	129.2586	FORBES - ROSEAU 500KV CKT 1	

SEASON	GROUP	SCENARIO	DIRECTION	SOURCE	MONITORED ELEMENT	RATE		CONTINGENCY		CONTINGENCY
						(MVA)	TDF	LOADING %		
25SP	16ALL	0	TO->FROM	G16_035	BUFFALO - JAMESTOWN 345KV CKT 1	705	0.10051	128.056	CENTER - CNTSHNT3 345.00 345KV CKT Z1	
25SP	16ALL	0	TO->FROM	G16_035	BUFFALO - JAMESTOWN 345KV CKT 1	705	0.10051	128.056	CNTSHNT3 345.00 - PRAIRIE3 345.00 345KV CKT 1	
20SP	16ALL	0	TO->FROM	G16_035	BUFFALO - JAMESTOWN 345KV CKT 1	704.9	0.09583	126.1858	RIEL - ROSEAU 500KV CKT 1	
17SP	16ALL	0	TO->FROM	G16_035	BUFFALO - JAMESTOWN 345KV CKT 1	704.9	0.09905	126.0215	RIEL - ROSEAU 500KV CKT 1	
20SP	16ALL	0	TO->FROM	G16_035	BUFFALO - JAMESTOWN 345KV CKT 1	704.9	0.09583	125.7318	ROSEAU - ROSEAU 2 500.00 500KV CKT 1	
20SP	16ALL	0	TO->FROM	G16_035	BUFFALO - JAMESTOWN 345KV CKT 1	704.9	0.09583	125.7318	ROSEAU - ROSEAU 2 500.00 500KV CKT 1	
17SP	16ALL	0	TO->FROM	G16_035	BUFFALO - JAMESTOWN 345KV CKT 1	704.9	0.09905	125.5534	ROSEAU - ROSEAU 2 500.00 500KV CKT 1	
17SP	16ALL	0	TO->FROM	G16_035	BUFFALO - JAMESTOWN 345KV CKT 1	704.9	0.09905	125.5534	ROSEAU - ROSEAU 2 500.00 500KV CKT 1	
20SP	16ALL	0	TO->FROM	G16_035	BUFFALO - JAMESTOWN 345KV CKT 1	704.9	0.09583	125.2637	FORBES - ROSEAU 500KV CKT 1	
17SP	16ALL	0	TO->FROM	G16_035	BUFFALO - JAMESTOWN 345KV CKT 1	704.9	0.09905	125.071	FORBES - ROSEAU 500KV CKT 1	
20SP	16ALL	0	TO->FROM	G16_035	BUFFALO - JAMESTOWN 345KV CKT 1	704.9	0.10016	121.8871	CENTER - CNTSHNT3 345.00 345KV CKT Z1	
20SP	16ALL	0	TO->FROM	G16_035	BUFFALO - JAMESTOWN 345KV CKT 1	704.9	0.10016	121.8871	CNTSHNT3 345.00 - PRAIRIE3 345.00 345KV CKT 1	
17SP	16ALL	0	TO->FROM	G16_035	BUFFALO - JAMESTOWN 345KV CKT 1	704.9	0.10329	120.9711	CENTER - CNTSHNT3 345.00 345KV CKT Z1	
17SP	16ALL	0	TO->FROM	G16_035	BUFFALO - JAMESTOWN 345KV CKT 1	704.9	0.10329	120.9711	CNTSHNT3 345.00 - PRAIRIE3 345.00 345KV CKT 1	
25SP	16ALL	0	TO->FROM	G16_035	BUFFALO - JAMESTOWN 345KV CKT 1	705	0.09466	117.5226	P12:345:UMZB:# 102 #: AVS BD IN ND. AVS BRD LR	
25SP	16ALL	0	TO->FROM	G16_035	BUFFALO - JAMESTOWN 345KV CKT 1	705	0.09466	117.5226	P12:345:UMZB:# 103 #: BD IN SD. LOSS OF LINE	
25SP	16ALL	0	TO->FROM	G16_035	BUFFALO - JAMESTOWN 345KV CKT 1	705	0.09466	117.4942	ANTELOP-LNX3345.00 - ANTELOPE VALLEY 345KV CKT Z	
25SP	16ALL	0	TO->FROM	G16_035	BUFFALO - JAMESTOWN 345KV CKT 1	705	0.09466	117.3807	ANTELOP-LNX3345.00 - BRDLAND-LNX3345.00 345KV CKT 1	
25SP	16ALL	0	TO->FROM	G16_035	BUFFALO - JAMESTOWN 345KV CKT 1	705	0.09466	117.3807	BRDLAND-LNX3345.00 - HURON 345KV CKT Z	
25SP	16ALL	0	TO->FROM	G16_035	BUFFALO - JAMESTOWN 345KV CKT 1	705	0.09466	117.3807	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	
25SP	16ALL	0	TO->FROM	G16_035	BUFFALO - JAMESTOWN 345KV CKT 1	705	0.09466	117.3807	P13:345:UMZB:# 244 #: BD IN SD. LOSS OF TX	
25SP	16ALL	0	TO->FROM	G16_035	BUFFALO - JAMESTOWN 345KV CKT 1	705	0.09425	117.3637	GLENBORO SOUTH - J290_SUB 230.00 230KV CKT 1	
16WP	16ALL	0	TO->FROM	G16_035	BUFFALO - JAMESTOWN 345KV CKT 1	716.9	0.1013	117.1343	CENTER - CNTSHNT3 345.00 345KV CKT Z1	
16WP	16ALL	0	TO->FROM	G16_035	BUFFALO - JAMESTOWN 345KV CKT 1	716.9	0.1013	117.1343	CNTSHNT3 345.00 - PRAIRIE3 345.00 345KV CKT 1	
17G	16ALL	0	TO->FROM	G16_035	BUFFALO - JAMESTOWN 345KV CKT 1	705	0.09783	116.9268	RIEL - ROSEAU 500KV CKT 1	
17G	16ALL	0	TO->FROM	G16_035	BUFFALO - JAMESTOWN 345KV CKT 1	705	0.09783	116.6147	ROSEAU - ROSEAU 2 500.00 500KV CKT 1	
17G	16ALL	0	TO->FROM	G16_035	BUFFALO - JAMESTOWN 345KV CKT 1	705	0.09783	116.6147	ROSEAU - ROSEAU 2 500.00 500KV CKT 1	
25SP	16ALL	0	TO->FROM	G16_035	BUFFALO - JAMESTOWN 345KV CKT 1	705	0.08832	116.3653	GRPRAR2-LNX3345.00 - YANKTON 345KV CKT Z	
17G	16ALL	0	TO->FROM	G16_035	BUFFALO - JAMESTOWN 345KV CKT 1	705	0.09783	116.3027	FORBES - ROSEAU 500KV CKT 1	
20WP	16ALL	0	TO->FROM	G16_035	BUFFALO - JAMESTOWN 345KV CKT 1	716.8	0.09797	116.1861	CENTER - CNTSHNT3 345.00 345KV CKT Z1	
20WP	16ALL	0	TO->FROM	G16_035	BUFFALO - JAMESTOWN 345KV CKT 1	716.8	0.09797	116.1861	CNTSHNT3 345.00 - PRAIRIE3 345.00 345KV CKT 1	
25SP	16ALL	0	TO->FROM	G16_035	BUFFALO - JAMESTOWN 345KV CKT 1	705	0.08716	116.0379	HANKINSON - WAHPETON 230KV CKT 1	
20SP	16ALL	0	TO->FROM	G16_035	BUFFALO - JAMESTOWN 345KV CKT 1	704.9	0.09594	115.8923	G16-044-TAP 345.00 - GROTON-LNX3 345.00 345KV CKT 1	
20SP	16ALL	0	TO->FROM	G16_035	BUFFALO - JAMESTOWN 345KV CKT 1	704.9	0.09594	115.8923	GROTON - GROTON-LNX3 345.00 345KV CKT Z	
25SP	16ALL	0	TO->FROM	G16_035	BUFFALO - JAMESTOWN 345KV CKT 1	705	0.05313	115.8715	MANDAN 4 230.00 - MPC02100TAP4230.00 230KV CKT 1	
17G	16ALL	0	TO->FROM	G16_035	BUFFALO - JAMESTOWN 345KV CKT 1	705	0.10202	115.502	CENTER - CNTSHNT3 345.00 345KV CKT Z1	
17G	16ALL	0	TO->FROM	G16_035	BUFFALO - JAMESTOWN 345KV CKT 1	705	0.10202	115.502	CNTSHNT3 345.00 - PRAIRIE3 345.00 345KV CKT 1	
17SP	16ALL	0	TO->FROM	G16_035	BUFFALO - JAMESTOWN 345KV CKT 1	704.9	0.09867	115.3869	FORMAN - OAKES 230KV CKT 1	
17SP	16ALL	0	TO->FROM	G16_035	BUFFALO - JAMESTOWN 345KV CKT 1	704.9	0.099	115.3149	G16-044-TAP 345.00 - GROTON-LNX3 345.00 345KV CKT 1	
17SP	16ALL	0	TO->FROM	G16_035	BUFFALO - JAMESTOWN 345KV CKT 1	704.9	0.099	115.3149	GROTON - GROTON-LNX3 345.00 345KV CKT Z	
25SP	16ALL	0	TO->FROM	G16_035	BUFFALO - JAMESTOWN 345KV CKT 1	705	0.09622	115.259	LELAND OLDS - LELAND1-LNX3345.00 345KV CKT Z	
25SP	16ALL	0	TO->FROM	G16_035	BUFFALO - JAMESTOWN 345KV CKT 1	705	0.09622	115.1456	G16-044-TAP 345.00 - LELAND1-LNX3345.00 345KV CKT 1	
25SP	16ALL	0	TO->FROM	G16_035	BUFFALO - JAMESTOWN 345KV CKT 1	705	0.09622	114.7223	P12:345:UMZB:# 109 #: LOS GRT IN ND. LOS GRT	
17SP	16ALL	0	TO->FROM	G16_035	BUFFALO - JAMESTOWN 345KV CKT 1	704.9	0.09715	113.8995	ELLENDALE - OAKES 230KV CKT 1	
20SP	16ALL	0	TO->FROM	G16_035	BUFFALO - JAMESTOWN 345KV CKT 1	704.9	0.10305	113.0267	FARGO - SHEYNE 230KV CKT 1	
16WP	16ALL	0	TO->FROM	G16_035	BUFFALO - JAMESTOWN 345KV CKT 1	716.9	0.09713	112.9456	RIEL - ROSEAU 500KV CKT 1	
16WP	16ALL	0	TO->FROM	G16_035	BUFFALO - JAMESTOWN 345KV CKT 1	716.9	0.09713	112.7643	ROSEAU - ROSEAU 2 500.00 500KV CKT 1	
16WP	16ALL	0	TO->FROM	G16_035	BUFFALO - JAMESTOWN 345KV CKT 1	716.9	0.09713	112.7643	ROSEAU - ROSEAU 2 500.00 500KV CKT 1	
16WP	16ALL	0	TO->FROM	G16_035	BUFFALO - JAMESTOWN 345KV CKT 1	716.9	0.09713	112.5969	FORBES - ROSEAU 500KV CKT 1	
20SP	16ALL	0	TO->FROM	G16_035	BUFFALO - JAMESTOWN 345KV CKT 1	704.9	0.09439	112.4262	P12:345:UMZB:# 103 #: BD IN SD. LOSS OF LINE	
20SP	16ALL	0	TO->FROM	G16_035	BUFFALO - JAMESTOWN 345KV CKT 1	704.9	0.09439	112.412	P12:345:UMZB:# 102 #: AVS BD IN ND. AVS BRD LR	
20SP	16ALL	0	TO->FROM	G16_035	BUFFALO - JAMESTOWN 345KV CKT 1	704.9	0.09439	112.3978	ANTELOP-LNX3345.00 - ANTELOPE VALLEY 345KV CKT Z	
20SP	16ALL	0	TO->FROM	G16_035	BUFFALO - JAMESTOWN 345KV CKT 1	704.9	0.09439	112.2843	BRDLAND-LNX3345.00 - HURON 345KV CKT Z	
20SP	16ALL	0	TO->FROM	G16_035	BUFFALO - JAMESTOWN 345KV CKT 1	704.9	0.09439	112.2843	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	
20SP	16ALL	0	TO->FROM	G16_035	BUFFALO - JAMESTOWN 345KV CKT 1	704.9	0.09439	112.2843	P13:345:UMZB:# 244 #: BD IN SD. LOSS OF TX	

SEASON	GROUP	SCENARIO	DIRECTION	SOURCE	MONITORED ELEMENT	RATE		CONTINGENCY		CONTINGENCY
						(MVA)	TDF	LOADING %		
17SP	16ALL	0	TO->FROM	G16_035	BUFFALO - JAMESTOWN 345KV CKT 1	704.9	0.09789	112.2525	FORMAN - HANKINSON 230KV CKT 1	
17SP	16ALL	0	TO->FROM	G16_035	BUFFALO - JAMESTOWN 345KV CKT 1	704.9	0.09903	112.0009	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT	
25SP	16ALL	0	TO->FROM	G16_035	BUFFALO - JAMESTOWN 345KV CKT 1	705	0.08832	111.8688	System Intact	
20WP	16ALL	0	TO->FROM	G16_035	BUFFALO - JAMESTOWN 345KV CKT 1	716.8	0.09347	111.8441	RIEL - ROSEAU 500KV CKT 1	
17SP	16ALL	0	TO->FROM	G16_035	BUFFALO - JAMESTOWN 345KV CKT 1	704.9	0.09728	111.6962	P12:345:UMZB:# 102 #: AVS BD IN ND. AVS BRD LR	
17SP	16ALL	0	TO->FROM	G16_035	BUFFALO - JAMESTOWN 345KV CKT 1	704.9	0.09728	111.6962	P12:345:UMZB:# 103 #: BD IN SD. LOSS OF LINE	
17SP	16ALL	0	TO->FROM	G16_035	BUFFALO - JAMESTOWN 345KV CKT 1	704.9	0.09728	111.6678	ANTELOP-LNX3345.00 - ANTELOPE VALLEY 345KV CKT Z	
20WP	16ALL	0	TO->FROM	G16_035	BUFFALO - JAMESTOWN 345KV CKT 1	716.8	0.09347	111.6627	ROSEAU - ROSEAUUM 2 500.00 500KV CKT 1	
20WP	16ALL	0	TO->FROM	G16_035	BUFFALO - JAMESTOWN 345KV CKT 1	716.8	0.09347	111.6627	ROSEAU - ROSEAUUM 2 500.00 500KV CKT 1	
17SP	16ALL	0	TO->FROM	G16_035	BUFFALO - JAMESTOWN 345KV CKT 1	704.9	0.09728	111.5401	P13:345:UMZB:# 244 #: BD IN SD. LOSS OF TX	
20WP	16ALL	0	TO->FROM	G16_035	BUFFALO - JAMESTOWN 345KV CKT 1	716.8	0.09347	111.4953	FORBES - ROSEAU 500KV CKT 1	
17SP	16ALL	0	TO->FROM	G16_035	BUFFALO - JAMESTOWN 345KV CKT 1	704.9	0.09149	111.4688	HANKINSON - WAHPETON 230KV CKT 1	
20SP	16ALL	0	TO->FROM	G16_035	BUFFALO - JAMESTOWN 345KV CKT 1	704.9	0.08807	111.4261	CENTER - JAMESTOWN 345KV CKT 1	
17G	16ALL	0	TO->FROM	G16_035	BUFFALO - JAMESTOWN 345KV CKT 1	705	0.09753	110.104	FORMAN - OAKES 230KV CKT 1	
20SP	16ALL	0	TO->FROM	G16_035	BUFFALO - JAMESTOWN 345KV CKT 1	704.9	0.09594	110.098	LELAND OLDS - LELAND1-LNX3345.00 345KV CKT Z	
20SP	16ALL	0	TO->FROM	G16_035	BUFFALO - JAMESTOWN 345KV CKT 1	704.9	0.09594	109.9987	G16-044-TAP 345.00 - LELAND1-LNX3345.00 345KV CKT 1	
16WP	16ALL	0	TO->FROM	G16_035	BUFFALO - JAMESTOWN 345KV CKT 1	716.9	0.0968	109.9973	FORMAN - OAKES 230KV CKT 1	
17G	16ALL	0	TO->FROM	G16_035	BUFFALO - JAMESTOWN 345KV CKT 1	705	0.09761	109.8726	G16-044-TAP 345.00 - GROTON-LNX3 345.00 345KV CKT 1	
17G	16ALL	0	TO->FROM	G16_035	BUFFALO - JAMESTOWN 345KV CKT 1	705	0.09761	109.8726	GROTON - GROTON-LNX3 345.00 345KV CKT Z	
16WP	16ALL	0	TO->FROM	G16_035	BUFFALO - JAMESTOWN 345KV CKT 1	716.9	0.09705	109.6261	G16-044-TAP 345.00 - GROTON-LNX3 345.00 345KV CKT 1	
16WP	16ALL	0	TO->FROM	G16_035	BUFFALO - JAMESTOWN 345KV CKT 1	716.9	0.09705	109.6261	GROTON - GROTON-LNX3 345.00 345KV CKT Z	
20SP	16ALL	0	TO->FROM	G16_035	BUFFALO - JAMESTOWN 345KV CKT 1	704.9	0.0529	109.6167	MANDAN 4 230.00 - MPC02100TAP4230.00 230KV CKT 1	
20SP	16ALL	0	TO->FROM	G16_035	BUFFALO - JAMESTOWN 345KV CKT 1	704.9	0.09594	109.5741	P12:345:UMZB:# 109 #: LOS GRT IN ND. LOS GRT	
17SP	16ALL	0	TO->FROM	G16_035	BUFFALO - JAMESTOWN 345KV CKT 1	704.9	0.099	109.4667	LELAND OLDS - LELAND1-LNX3345.00 345KV CKT Z	
17SP	16ALL	0	TO->FROM	G16_035	BUFFALO - JAMESTOWN 345KV CKT 1	704.9	0.099	109.3532	G16-044-TAP 345.00 - LELAND1-LNX3345.00 345KV CKT 1	
17SP	16ALL	0	TO->FROM	G16_035	BUFFALO - JAMESTOWN 345KV CKT 1	704.9	0.099	108.9199	P12:345:UMZB:# 109 #: LOS GRT IN ND. LOS GRT	
17G	16ALL	0	TO->FROM	G16_035	BUFFALO - JAMESTOWN 345KV CKT 1	705	0.09602	108.6452	ELLENDALE - OAKES 230KV CKT 1	
16WP	16ALL	0	TO->FROM	G16_035	BUFFALO - JAMESTOWN 345KV CKT 1	716.9	0.0953	108.5792	ELLENDALE - OAKES 230KV CKT 1	
20WP	16ALL	0	TO->FROM	G16_035	BUFFALO - JAMESTOWN 345KV CKT 1	716.8	0.09372	107.7887	G16-044-TAP 345.00 - GROTON-LNX3 345.00 345KV CKT 1	
20WP	16ALL	0	TO->FROM	G16_035	BUFFALO - JAMESTOWN 345KV CKT 1	716.8	0.09372	107.7887	GROTON - GROTON-LNX3 345.00 345KV CKT Z	
17G	16ALL	0	TO->FROM	G16_035	BUFFALO - JAMESTOWN 345KV CKT 1	705	0.09675	106.9701	FORMAN - HANKINSON 230KV CKT 1	
20SP	16ALL	0	TO->FROM	G16_035	BUFFALO - JAMESTOWN 345KV CKT 1	704.9	0.08807	106.8722	System Intact	
16WP	16ALL	0	TO->FROM	G16_035	BUFFALO - JAMESTOWN 345KV CKT 1	716.9	0.09602	106.7062	FORMAN - HANKINSON 230KV CKT 1	
17G	16ALL	0	TO->FROM	G16_035	BUFFALO - JAMESTOWN 345KV CKT 1	705	0.09555	106.4472	G09_0011ST 345.00 - WATERTOWN 345KV CKT 1	
16WP	16ALL	0	TO->FROM	G16_035	BUFFALO - JAMESTOWN 345KV CKT 1	716.9	0.09497	106.386	GLENBORO SOUTH - J290_SUB 230.00 230KV CKT 1	
17G	16ALL	0	TO->FROM	G16_035	BUFFALO - JAMESTOWN 345KV CKT 1	705	0.09763	106.345	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT	
17G	16ALL	0	TO->FROM	G16_035	BUFFALO - JAMESTOWN 345KV CKT 1	705	0.09763	106.2883	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z	
16WP	16ALL	0	TO->FROM	G16_035	BUFFALO - JAMESTOWN 345KV CKT 1	716.9	0.09488	106.1195	G09_0011ST 345.00 - WATERTOWN 345KV CKT 1	
17G	16ALL	0	TO->FROM	G16_035	BUFFALO - JAMESTOWN 345KV CKT 1	705	0.09592	106.0738	P12:345:UMZB:# 102 #: AVS BD IN ND. AVS BRD LR	
17G	16ALL	0	TO->FROM	G16_035	BUFFALO - JAMESTOWN 345KV CKT 1	705	0.09592	106.0738	P12:345:UMZB:# 103 #: BD IN SD. LOSS OF LINE	
17G	16ALL	0	TO->FROM	G16_035	BUFFALO - JAMESTOWN 345KV CKT 1	705	0.09592	106.0454	ANTELOP-LNX3345.00 - ANTELOPE VALLEY 345KV CKT Z	
17G	16ALL	0	TO->FROM	G16_035	BUFFALO - JAMESTOWN 345KV CKT 1	705	0.09592	105.9461	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	
17G	16ALL	0	TO->FROM	G16_035	BUFFALO - JAMESTOWN 345KV CKT 1	705	0.09592	105.9461	P13:345:UMZB:# 244 #: BD IN SD. LOSS OF TX	
20WP	16ALL	0	TO->FROM	G16_035	BUFFALO - JAMESTOWN 345KV CKT 1	716.8	0.09184	105.7697	GLENBORO SOUTH - J290_SUB 230.00 230KV CKT 1	
16WP	16ALL	0	TO->FROM	G16_035	BUFFALO - JAMESTOWN 345KV CKT 1	716.9	0.09542	105.7419	P12:345:UMZB:# 102 #: AVS BD IN ND. AVS BRD LR	
16WP	16ALL	0	TO->FROM	G16_035	BUFFALO - JAMESTOWN 345KV CKT 1	716.9	0.09542	105.7419	P12:345:UMZB:# 103 #: BD IN SD. LOSS OF LINE	
17SP	16ALL	0	TO->FROM	G16_035	BUFFALO - JAMESTOWN 345KV CKT 1	704.9	0.09062	105.7224	System Intact	
16WP	16ALL	0	TO->FROM	G16_035	BUFFALO - JAMESTOWN 345KV CKT 1	716.9	0.09542	105.714	ANTELOP-LNX3345.00 - ANTELOPE VALLEY 345KV CKT Z	
16WP	16ALL	0	TO->FROM	G16_035	BUFFALO - JAMESTOWN 345KV CKT 1	716.9	0.0897	105.6817	HANKINSON - WAHPETON 230KV CKT 1	
16WP	16ALL	0	TO->FROM	G16_035	BUFFALO - JAMESTOWN 345KV CKT 1	716.9	0.08887	105.6149	MAPLE RIVER - PILSBRY4 230.00 230KV CKT 1	
20WP	16ALL	0	TO->FROM	G16_035	BUFFALO - JAMESTOWN 345KV CKT 1	716.8	0.08609	104.8381	MAPLE RIVER - PILSBRY4 230.00 230KV CKT 1	
20WP	16ALL	0	TO->FROM	G16_035	BUFFALO - JAMESTOWN 345KV CKT 1	716.8	0.0908	104.7682	G09_0011ST 345.00 - WATERTOWN 345KV CKT 1	
20WP	16ALL	0	TO->FROM	G16_035	BUFFALO - JAMESTOWN 345KV CKT 1	716.8	0.09404	104.6426	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT	
20WP	16ALL	0	TO->FROM	G16_035	BUFFALO - JAMESTOWN 345KV CKT 1	716.8	0.09223	104.5423	P12:345:UMZB:# 102 #: AVS BD IN ND. AVS BRD LR	
20WP	16ALL	0	TO->FROM	G16_035	BUFFALO - JAMESTOWN 345KV CKT 1	716.8	0.09223	104.5423	P12:345:UMZB:# 103 #: BD IN SD. LOSS OF LINE	

SEASON	GROUP	SCENARIO	DIRECTION	SOURCE	MONITORED ELEMENT	RATE		CONTINGENCY		CONTINGENCY
						(MVA)	TDF	LOADING %		
20WP	16ALL	0	TO->FROM	G16_035	BUFFALO - JAMESTOWN 345KV CKT 1	716.8	0.09223	104.5283	ANTELOP-LNX3345.00 - ANTELOPE VALLEY 345KV CKT Z	
20WP	16ALL	0	TO->FROM	G16_035	BUFFALO - JAMESTOWN 345KV CKT 1	716.8	0.09223	104.4586	ANTELOP-LNX3345.00 - BRDLAND-LNX3345.00 345KV CKT 1	
20WP	16ALL	0	TO->FROM	G16_035	BUFFALO - JAMESTOWN 345KV CKT 1	716.8	0.09223	104.4586	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	
20WP	16ALL	0	TO->FROM	G16_035	BUFFALO - JAMESTOWN 345KV CKT 1	716.8	0.09223	104.4586	P13:345:UMZB:# 244 #: BD IN SD. LOSS OF TX	
20WP	16ALL	0	TO->FROM	G16_035	BUFFALO - JAMESTOWN 345KV CKT 1	716.8	0.0849	104.1509	HANKINSON - WAHPETON 230KV CKT 1	
17G	16ALL	0	TO->FROM	G16_035	BUFFALO - JAMESTOWN 345KV CKT 1	705	0.09761	104.0098	LELAND OLDS - LELAND1-LNX3345.00 345KV CKT Z	
20WP	16ALL	0	TO->FROM	G16_035	BUFFALO - JAMESTOWN 345KV CKT 1	716.8	0.0511	103.8472	MANDAN 4 230.00 - MPC02100TAP4230.00 230KV CKT 1	
16WP	16ALL	0	TO->FROM	G16_035	BUFFALO - JAMESTOWN 345KV CKT 1	716.9	0.09705	103.8315	LELAND OLDS - LELAND1-LNX3345.00 345KV CKT Z	
16WP	16ALL	0	TO->FROM	G16_035	BUFFALO - JAMESTOWN 345KV CKT 1	716.9	0.09705	103.7338	G16-044-TAP 345.00 - LELAND1-LNX3345.00 345KV CKT 1	
16WP	16ALL	0	TO->FROM	G16_035	BUFFALO - JAMESTOWN 345KV CKT 1	716.9	0.08887	100.6072	System Intact	
17G	16ALL	0	TO->FROM	G16_035	BUFFALO - JAMESTOWN 345KV CKT 1	705	0.08949	100.4846	System Intact	
20WP	16ALL	0	TO->FROM	G16_035	BUFFALO - JAMESTOWN 345KV CKT 1	716.8	0.08609	99.9971	System Intact	
17G	16ALL	0	TO->FROM	G16_035	COLBYS 161.00 - NEW IOWA WIND 161KV CKT 1	197.8	0.03911	106.1712	HAZLETON - MITCHLCO3 345.00 345KV CKT 1	
17G	16ALL	0	TO->FROM	G16_035	ELLENDALE - J316_SUB 230.00 230KV CKT 1	342.8	0.06116	145.1304	ELLENDALE - MERRCRT4 230.00 230KV CKT 1	
17SP	16ALL	0	TO->FROM	G16_035	ELLENDALE - J316_SUB 230.00 230KV CKT 1	342.8	0.06212	144.4793	ELLENDALE - MERRCRT4 230.00 230KV CKT 1	
16WP	16ALL	0	TO->FROM	G16_035	ELLENDALE - J316_SUB 230.00 230KV CKT 1	350.8	0.06138	141.0501	ELLENDALE - MERRCRT4 230.00 230KV CKT 1	
17SP	16ALL	0	TO->FROM	G16_035	ELLENDALE - J316_SUB 230.00 230KV CKT 1	342.8	0.0392	106.3395	BUFFALO - JAMESTOWN 345KV CKT 1	
17G	16ALL	0	TO->FROM	G16_035	ELLENDALE - J316_SUB 230.00 230KV CKT 1	342.8	0.0386	106.2411	BUFFALO - JAMESTOWN 345KV CKT 1	
17G	16ALL	0	TO->FROM	G16_035	ELLENDALE - J316_SUB 230.00 230KV CKT 1	342.8	0.03827	105.7451	G16-044-TAP 345.00 - GROTON-LNX3 345.00 345KV CKT 1	
17G	16ALL	0	TO->FROM	G16_035	ELLENDALE - J316_SUB 230.00 230KV CKT 1	342.8	0.03827	105.7451	GROTON - GROTON-LNX3 345.00 345KV CKT Z	
17SP	16ALL	0	TO->FROM	G16_035	ELLENDALE - J316_SUB 230.00 230KV CKT 1	342.8	0.03894	105.5434	G16-044-TAP 345.00 - GROTON-LNX3 345.00 345KV CKT 1	
17SP	16ALL	0	TO->FROM	G16_035	ELLENDALE - J316_SUB 230.00 230KV CKT 1	342.8	0.03894	105.5434	GROTON - GROTON-LNX3 345.00 345KV CKT Z	
17SP	16ALL	0	TO->FROM	G16_035	ELLENDALE - J316_SUB 230.00 230KV CKT 1	342.8	0.0397	104.6644	CENTER - JAMESTOWN 345KV CKT 1	
17SP	16ALL	0	TO->FROM	G16_035	ELLENDALE - J316_SUB 230.00 230KV CKT 1	342.8	0.03667	104.4676	RIEL - ROSEAU 500KV CKT 1	
17G	16ALL	0	TO->FROM	G16_035	ELLENDALE - J316_SUB 230.00 230KV CKT 1	342.8	0.0391	104.4468	CENTER - JAMESTOWN 345KV CKT 1	
17SP	16ALL	0	TO->FROM	G16_035	ELLENDALE - J316_SUB 230.00 230KV CKT 1	342.8	0.03667	104.2925	ROSEAU - ROSEAUM 2 500.00 500KV CKT 1	
17SP	16ALL	0	TO->FROM	G16_035	ELLENDALE - J316_SUB 230.00 230KV CKT 1	342.8	0.03667	104.2925	ROSEAU - ROSEAUM 2 500.00 500KV CKT 1	
17SP	16ALL	0	TO->FROM	G16_035	ELLENDALE - J316_SUB 230.00 230KV CKT 1	342.8	0.03667	104.0883	FORBES - ROSEAU 500KV CKT 1	
17G	16ALL	0	TO->FROM	G16_035	ELLENDALE - J316_SUB 230.00 230KV CKT 1	318.8	0.03449	104.0341	System Intact	
17SP	16ALL	0	TO->FROM	G16_035	ELLENDALE - J316_SUB 230.00 230KV CKT 1	318.8	0.03504	103.6239	System Intact	
16WP	16ALL	0	TO->FROM	G16_035	ELLENDALE - J316_SUB 230.00 230KV CKT 1	318.8	0.03462	103.5687	System Intact	
16WP	16ALL	0	TO->FROM	G16_035	ELLENDALE - J316_SUB 230.00 230KV CKT 1	350.8	0.0387	103.5562	BUFFALO - JAMESTOWN 345KV CKT 1	
17G	16ALL	0	TO->FROM	G16_035	ELLENDALE - J316_SUB 230.00 230KV CKT 1	342.8	0.03611	103.3269	RIEL - ROSEAU 500KV CKT 1	
17G	16ALL	0	TO->FROM	G16_035	ELLENDALE - J316_SUB 230.00 230KV CKT 1	342.8	0.03611	103.1811	ROSEAU - ROSEAUM 2 500.00 500KV CKT 1	
17G	16ALL	0	TO->FROM	G16_035	ELLENDALE - J316_SUB 230.00 230KV CKT 1	342.8	0.03611	103.1811	ROSEAU - ROSEAUM 2 500.00 500KV CKT 1	
17G	16ALL	0	TO->FROM	G16_035	ELLENDALE - J316_SUB 230.00 230KV CKT 1	342.8	0.03611	103.0644	FORBES - ROSEAU 500KV CKT 1	
17G	16ALL	0	TO->FROM	G16_035	ELLENDALE - J316_SUB 230.00 230KV CKT 1	342.8	0.03736	102.7316	BISON 3 345.00 - BUFFALO 345KV CKT 1	
16WP	16ALL	0	TO->FROM	G16_035	ELLENDALE - J316_SUB 230.00 230KV CKT 1	350.8	0.03843	102.6902	G16-044-TAP 345.00 - GROTON-LNX3 345.00 345KV CKT 1	
16WP	16ALL	0	TO->FROM	G16_035	ELLENDALE - J316_SUB 230.00 230KV CKT 1	350.8	0.03843	102.6902	GROTON - GROTON-LNX3 345.00 345KV CKT Z	
17SP	16ALL	0	TO->FROM	G16_035	ELLENDALE - J316_SUB 230.00 230KV CKT 1	342.8	0.03794	102.6788	BISON 3 345.00 - BUFFALO 345KV CKT 1	
17G	16ALL	0	TO->FROM	G16_035	ELLENDALE - J316_SUB 230.00 230KV CKT 1	342.8	0.03827	102.2383	P12:345:UMZB:# 109 #: LOS GRT IN ND. LOS GRT	
17SP	16ALL	0	TO->FROM	G16_035	ELLENDALE - J316_SUB 230.00 230KV CKT 1	342.8	0.03894	102.0658	P12:345:UMZB:# 109 #: LOS GRT IN ND. LOS GRT	
16WP	16ALL	0	TO->FROM	G16_035	ELLENDALE - J316_SUB 230.00 230KV CKT 1	350.8	0.03919	101.2923	CENTER - JAMESTOWN 345KV CKT 1	
17SP	16ALL	0	TO->FROM	G16_035	ELLENDALE - J316_SUB 230.00 230KV CKT 1	342.8	0.03504	101.2115	EAGLE 4 230.00 - PAHOJA 230KV CKT 1	
17G	16ALL	0	TO->FROM	G16_035	ELLENDALE - J316_SUB 230.00 230KV CKT 1	342.8	0.04547	100.9126	CENTER - SQUARE BUTTE 230KV CKT 1	
17SP	16ALL	0	TO->FROM	G16_035	ELLENDALE - J316_SUB 230.00 230KV CKT 1	342.8	0.03504	100.8614	BIG STONE 230/24.0KV TRANSFORMER CKT 1	
17G	16ALL	0	TO->FROM	G16_035	ELLENDALE - J316_SUB 230.00 230KV CKT 1	342.8	0.03676	100.7971	ANTELOP-LNX3345.00 - ANTELOPE VALLEY 345KV CKT Z	
17G	16ALL	0	TO->FROM	G16_035	ELLENDALE - J316_SUB 230.00 230KV CKT 1	342.8	0.03676	100.7679	P12:345:UMZB:# 102 #: AVS BD IN ND. AVS BRD LR	
17G	16ALL	0	TO->FROM	G16_035	ELLENDALE - J316_SUB 230.00 230KV CKT 1	342.8	0.03676	100.7679	P12:345:UMZB:# 103 #: BD IN SD. LOSS OF LINE	
17G	16ALL	0	TO->FROM	G16_035	ELLENDALE - J316_SUB 230.00 230KV CKT 1	342.8	0.03676	100.7096	ANTELOP-LNX3345.00 - BRDLAND-LNX3345.00 345KV CKT 1	
17G	16ALL	0	TO->FROM	G16_035	ELLENDALE - J316_SUB 230.00 230KV CKT 1	342.8	0.03676	100.7096	BRDLAND-LNX3345.00 - HURON 345KV CKT Z	
17G	16ALL	0	TO->FROM	G16_035	ELLENDALE - J316_SUB 230.00 230KV CKT 1	342.8	0.03676	100.7096	BROADLAND - HURON 230KV CKT 1	
17G	16ALL	0	TO->FROM	G16_035	ELLENDALE - J316_SUB 230.00 230KV CKT 1	342.8	0.03676	100.7096	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	
17G	16ALL	0	TO->FROM	G16_035	ELLENDALE - J316_SUB 230.00 230KV CKT 1	342.8	0.03676	100.7096	P13:345:UMZB:# 244 #: BD IN SD. LOSS OF TX	
17SP	16ALL	0	TO->FROM	G16_035	ELLENDALE - J316_SUB 230.00 230KV CKT 1	342.8	0.03739	100.6698	ANTELOP-LNX3345.00 - ANTELOPE VALLEY 345KV CKT Z	

SEASON	GROUP	SCENARIO	DIRECTION	SOURCE	MONITORED ELEMENT	RATE		CONTINGENCY		CONTINGENCY
						(MVA)	TDF	LOADING %		
17SP	16ALL	0	TO->FROM	G16_035	ELLENDALE - J316_SUB 230.00 230KV CKT 1	342.8	0.03739	100.6698	P12:345:UMZB:# 102 #: AVS BD IN ND. AVS BRD LR	
17SP	16ALL	0	TO->FROM	G16_035	ELLENDALE - J316_SUB 230.00 230KV CKT 1	342.8	0.03739	100.6698	P12:345:UMZB:# 103 #: BD IN SD. LOSS OF LINE	
17SP	16ALL	0	TO->FROM	G16_035	ELLENDALE - J316_SUB 230.00 230KV CKT 1	342.8	0.03739	100.5823	ANTELOP-LNX3345.00 - BRDLAND-LNX3345.00 345KV CKT 1	
17SP	16ALL	0	TO->FROM	G16_035	ELLENDALE - J316_SUB 230.00 230KV CKT 1	342.8	0.03739	100.5823	BRDLAND-LNX3345.00 - HURON 345KV CKT Z	
17SP	16ALL	0	TO->FROM	G16_035	ELLENDALE - J316_SUB 230.00 230KV CKT 1	342.8	0.03739	100.5823	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	
17SP	16ALL	0	TO->FROM	G16_035	ELLENDALE - J316_SUB 230.00 230KV CKT 1	342.8	0.03739	100.5823	P13:345:UMZB:# 244 #: BD IN SD. LOSS OF TX	
17G	16ALL	0	TO->FROM	G16_035	ELLENDALE - MERRCRT4 230.00 230KV CKT 1	383	0.06015	124.4472	ELLENDALE - J316_SUB 230.00 230KV CKT 1	
17SP	16ALL	0	TO->FROM	G16_035	ELLENDALE - MERRCRT4 230.00 230KV CKT 1	383	0.06111	123.8621	ELLENDALE - J316_SUB 230.00 230KV CKT 1	
16WP	16ALL	0	TO->FROM	G16_035	ELLENDALE - MERRCRT4 230.00 230KV CKT 1	398	0.06037	119.0778	ELLENDALE - J316_SUB 230.00 230KV CKT 1	
17G	16ALL	0	FROM->TO	G16_035	ELLENDALE - OAKES 230KV CKT 1	350.8	0.05679	133.874	ELLENDALE (ELLENDL TR1) 230/115/13.8KV TRANSFORMER CKT 1	
17SP	16ALL	0	FROM->TO	G16_035	ELLENDALE - OAKES 230KV CKT 1	351	0.05742	133.3885	ELLENDALE (ELLENDL TR1) 230/115/13.8KV TRANSFORMER CKT 1	
16WP	16ALL	0	FROM->TO	G16_035	ELLENDALE - OAKES 230KV CKT 1	350.9	0.05667	132.9478	ELLENDALE (ELLENDL TR1) 230/115/13.8KV TRANSFORMER CKT 1	
17G	16ALL	0	FROM->TO	G16_035	ELLENDALE - OAKES 230KV CKT 1	350.8	0.05679	132.0496	ABERDEEN JCT - ELLENDALE 115KV CKT 1	
17G	16ALL	0	FROM->TO	G16_035	ELLENDALE - OAKES 230KV CKT 1	350.8	0.05679	132.0496	P12:115:UMZ:# 232 #: AB IN SD. ABERDEEN A TAP BETWEEN ELLENDALE AND ABERDEEN-SIEBRECHT.	
17SP	16ALL	0	FROM->TO	G16_035	ELLENDALE - OAKES 230KV CKT 1	351	0.05274	131.3943	BUFFALO - JAMESTOWN 345KV CKT 1	
17SP	16ALL	0	FROM->TO	G16_035	ELLENDALE - OAKES 230KV CKT 1	351	0.05742	131.3088	ABERDEEN JCT - ELLENDALE 115KV CKT 1	
17SP	16ALL	0	FROM->TO	G16_035	ELLENDALE - OAKES 230KV CKT 1	351	0.05742	131.3088	P12:115:UMZ:# 232 #: AB IN SD. ABERDEEN A TAP BETWEEN ELLENDALE AND ABERDEEN-SIEBRECHT.	
17G	16ALL	0	FROM->TO	G16_035	ELLENDALE - OAKES 230KV CKT 1	350.8	0.0526	130.6069	BUFFALO - JAMESTOWN 345KV CKT 1	
16WP	16ALL	0	FROM->TO	G16_035	ELLENDALE - OAKES 230KV CKT 1	350.9	0.05191	129.9066	BUFFALO - JAMESTOWN 345KV CKT 1	
16WP	16ALL	0	FROM->TO	G16_035	ELLENDALE - OAKES 230KV CKT 1	350.9	0.05667	129.4425	ABERDEEN JCT - ELLENDALE 115KV CKT 1	
16WP	16ALL	0	FROM->TO	G16_035	ELLENDALE - OAKES 230KV CKT 1	350.9	0.05667	129.4425	P12:115:UMZ:# 232 #: AB IN SD. ABERDEEN A TAP BETWEEN ELLENDALE AND ABERDEEN-SIEBRECHT.	
17SP	16ALL	0	FROM->TO	G16_035	ELLENDALE - OAKES 230KV CKT 1	351	0.05231	129.4173	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	
17SP	16ALL	0	FROM->TO	G16_035	ELLENDALE - OAKES 230KV CKT 1	351	0.054	129.1783	CENTER - JAMESTOWN 345KV CKT 1	
17G	16ALL	0	FROM->TO	G16_035	ELLENDALE - OAKES 230KV CKT 1	350.8	0.05679	128.9139	ABERDEEN JCT - ABERDEEN SIEBRECHT 115KV CKT 1	
17SP	16ALL	0	FROM->TO	G16_035	ELLENDALE - OAKES 230KV CKT 1	351	0.05231	128.6765	G09_001IST 345.00 - GROTON 345KV CKT 1	
17G	16ALL	0	FROM->TO	G16_035	ELLENDALE - OAKES 230KV CKT 1	350.8	0.05385	128.1824	CENTER - JAMESTOWN 345KV CKT 1	
17G	16ALL	0	FROM->TO	G16_035	ELLENDALE - OAKES 230KV CKT 1	350.8	0.05214	127.7373	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	
17G	16ALL	0	FROM->TO	G16_035	ELLENDALE - OAKES 230KV CKT 1	350.8	0.05214	126.9962	G09_001IST 345.00 - GROTON 345KV CKT 1	
16WP	16ALL	0	FROM->TO	G16_035	ELLENDALE - OAKES 230KV CKT 1	350.9	0.05315	126.5709	CENTER - JAMESTOWN 345KV CKT 1	
17SP	16ALL	0	FROM->TO	G16_035	ELLENDALE - OAKES 230KV CKT 1	351	0.04549	126.3937	WINGER (230/115) 230/115/13.2KV TRANSFORMER CKT 1	
17G	16ALL	0	FROM->TO	G16_035	ELLENDALE - OAKES 230KV CKT 1	318.8	0.04544	125.9374	System Intact	
16WP	16ALL	0	FROM->TO	G16_035	ELLENDALE - OAKES 230KV CKT 1	350.9	0.05145	125.929	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	
17SP	16ALL	0	FROM->TO	G16_035	ELLENDALE - OAKES 230KV CKT 1	319	0.04549	125.8752	System Intact	
17SP	16ALL	0	FROM->TO	G16_035	ELLENDALE - OAKES 230KV CKT 1	351	0.04549	125.8524	BIG STONE 230/24.0KV TRANSFORMER CKT 1	
17SP	16ALL	0	FROM->TO	G16_035	ELLENDALE - OAKES 230KV CKT 1	351	0.05052	125.0822	BISON 3 345.00 - BUFFALO 345KV CKT 1	
16WP	16ALL	0	FROM->TO	G16_035	ELLENDALE - OAKES 230KV CKT 1	318.9	0.04479	124.8061	System Intact	
17SP	16ALL	0	FROM->TO	G16_035	ELLENDALE - OAKES 230KV CKT 1	351	0.04763	124.7831	RIEL - ROSEAU 500KV CKT 1	
17G	16ALL	0	FROM->TO	G16_035	ELLENDALE - OAKES 230KV CKT 1	350.8	0.0504	124.5527	BISON 3 345.00 - BUFFALO 345KV CKT 1	
17SP	16ALL	0	FROM->TO	G16_035	ELLENDALE - OAKES 230KV CKT 1	351	0.04763	124.5267	ROSEAU - ROSEAUM 2 500.00 500KV CKT 1	
17SP	16ALL	0	FROM->TO	G16_035	ELLENDALE - OAKES 230KV CKT 1	351	0.04763	124.5267	ROSEAU - ROSEAUM 2 500.00 500KV CKT 1	
17SP	16ALL	0	FROM->TO	G16_035	ELLENDALE - OAKES 230KV CKT 1	351	0.04763	124.2703	FORBES - ROSEAU 500KV CKT 1	
17SP	16ALL	0	FROM->TO	G16_035	ELLENDALE - OAKES 230KV CKT 1	351	0.05742	124.0723	ABERDEEN JCT - ABERDEEN SIEBRECHT 115KV CKT 1	
16WP	16ALL	0	FROM->TO	G16_035	ELLENDALE - OAKES 230KV CKT 1	350.9	0.05667	123.7429	ABERDEEN JCT - ABERDEEN SIEBRECHT 115KV CKT 1	
16WP	16ALL	0	FROM->TO	G16_035	ELLENDALE - OAKES 230KV CKT 1	350.9	0.04972	123.6029	BISON 3 345.00 - BUFFALO 345KV CKT 1	
17G	16ALL	0	FROM->TO	G16_035	ELLENDALE - OAKES 230KV CKT 1	350.8	0.04544	123.5999	P12:230:UMZW:# 1770 #: FB IN SD. FB-BIGSTONE LINE FAULT	
17G	16ALL	0	FROM->TO	G16_035	ELLENDALE - OAKES 230KV CKT 1	350.8	0.04544	123.1723	BIG STONE 230/24.0KV TRANSFORMER CKT 1	
17G	16ALL	0	FROM->TO	G16_035	ELLENDALE - OAKES 230KV CKT 1	350.8	0.04756	122.8384	RIEL - ROSEAU 500KV CKT 1	
17G	16ALL	0	FROM->TO	G16_035	ELLENDALE - OAKES 230KV CKT 1	350.8	0.04756	122.6959	ROSEAU - ROSEAUM 2 500.00 500KV CKT 1	
17G	16ALL	0	FROM->TO	G16_035	ELLENDALE - OAKES 230KV CKT 1	350.8	0.04756	122.6959	ROSEAU - ROSEAUM 2 500.00 500KV CKT 1	
16WP	16ALL	0	FROM->TO	G16_035	ELLENDALE - OAKES 230KV CKT 1	350.9	0.04479	122.6579	ABERDEEN JCT - ABERDEEN SIEBRECHT 115KV CKT 1	
17G	16ALL	0	FROM->TO	G16_035	ELLENDALE - OAKES 230KV CKT 1	350.8	0.04756	122.5249	FORBES - ROSEAU 500KV CKT 1	
16WP	16ALL	0	FROM->TO	G16_035	ELLENDALE - OAKES 230KV CKT 1	350.9	0.04479	122.2304	BIG STONE 230/24.0KV TRANSFORMER CKT 1	
16WP	16ALL	0	FROM->TO	G16_035	ELLENDALE - OAKES 230KV CKT 1	350.9	0.04689	119.8423	RIEL - ROSEAU 500KV CKT 1	
16WP	16ALL	0	FROM->TO	G16_035	ELLENDALE - OAKES 230KV CKT 1	350.9	0.04689	119.7568	ROSEAU - ROSEAUM 2 500.00 500KV CKT 1	
16WP	16ALL	0	FROM->TO	G16_035	ELLENDALE - OAKES 230KV CKT 1	350.9	0.04689	119.7568	ROSEAU - ROSEAUM 2 500.00 500KV CKT 1	

SEASON	GROUP	SCENARIO	DIRECTION	SOURCE	MONITORED ELEMENT	RATE		CONTINGENCY		CONTINGENCY
						(MVA)	TDF	LOADING %		
16WP	16ALL	0	FROM->TO	G16_035	ELLENDALE - OAKES 230KV CKT 1	350.9	0.04689	119.6713	FORBES - ROSEAU 500KV CKT 1	
17G	16ALL	0	FROM->TO	G16_035	ELLENDALE - OAKES 230KV CKT 1	350.8	0.04739	119.1671	CNTSHNT3 345.00 - PRAIRIE3 345.00 345KV CKT 1	
16WP	16ALL	0	FROM->TO	G16_035	ELLENDALE - OAKES 230KV CKT 1	350.9	0.04673	118.7083	CENTER - CNTSHNT3 345.00 345KV CKT Z1	
16WP	16ALL	0	FROM->TO	G16_035	ELLENDALE - OAKES 230KV CKT 1	350.9	0.04673	118.7083	CNTSHNT3 345.00 - PRAIRIE3 345.00 345KV CKT 1	
17G	16ALL	0	FROM->TO	G16_035	ELLENDALE - OAKES 230KV CKT 1	350.8	0.04823	116.5463	ABERDEEN SIEBRECHT - GROTON 115KV CKT 1	
17SP	16ALL	0	FROM->TO	G16_035	ELLENDALE - OAKES 230KV CKT 1	351	0.03085	116.3915	GRANTE FALLS - MANDAN 4 230.00 230KV CKT 1	
17SP	16ALL	0	FROM->TO	G16_035	ELLENDALE - OAKES 230KV CKT 1	351	0.0374	116.1338	BIG STONE - BROWNS VALLEY 230KV CKT 1	
17G	16ALL	0	FROM->TO	G16_035	ELLENDALE - OAKES 230KV CKT 1	350.8	0.03084	115.8567	GRANTE FALLS - MANDAN 4 230.00 230KV CKT 1	
16WP	16ALL	0	FROM->TO	G16_035	ELLENDALE - OAKES 230KV CKT 1	350.9	0.04714	115.8076	ABERDEEN SIEBRECHT - GROTON 115KV CKT 1	
16WP	16ALL	0	FROM->TO	G16_035	ELLENDALE - OAKES 230KV CKT 1	350.9	0.0302	115.0076	GRANTE FALLS - MANDAN 4 230.00 230KV CKT 1	
16WP	16ALL	0	FROM->TO	G16_035	ELLENDALE - OAKES 230KV CKT 1	350.9	0.03681	114.9879	BIG STONE - BROWNS VALLEY 230KV CKT 1	
17SP	16ALL	0	FROM->TO	G16_035	ELLENDALE - OAKES 230KV CKT 1	351	0.04706	113.5628	P12:345:UMZB:# 109 #: LOS GRT IN ND. LOS GRT	
17G	16ALL	0	FROM->TO	G16_035	ELLENDALE - OAKES 230KV CKT 1	350.8	0.04696	113.5114	P12:345:UMZB:# 109 #: LOS GRT IN ND. LOS GRT	
16WP	16ALL	0	FROM->TO	G16_035	ELLENDALE - OAKES 230KV CKT 1	350.9	0.04633	112.4192	P12:345:UMZB:# 109 #: LOS GRT IN ND. LOS GRT	
17G	16ALL	0	FROM->TO	G16_035	ELLENDALE (ELLENDL TR1) 230/115/13.8KV TRANSFORMER CKT 1	187.7	0.03373	130.0209	ELLENDALE - OAKES 230KV CKT 1	
17G	16ALL	0	FROM->TO	G16_035	ELLENDALE (ELLENDL TR1) 230/115/13.8KV TRANSFORMER CKT 1	188	0.03373	129.7603	ELLENDALE - OAKES 230KV CKT 1	
16WP	16ALL	0	FROM->TO	G16_035	ELLENDALE (ELLENDL TR1) 230/115/13.8KV TRANSFORMER CKT 1	187.9	0.0344	129.6163	ELLENDALE - OAKES 230KV CKT 1	
16WP	16ALL	0	FROM->TO	G16_035	ELLENDALE (ELLENDL TR1) 230/115/13.8KV TRANSFORMER CKT 1	188	0.0344	129.4409	ELLENDALE - OAKES 230KV CKT 1	
17SP	16ALL	0	FROM->TO	G16_035	ELLENDALE (ELLENDL TR1) 230/115/13.8KV TRANSFORMER CKT 1	187.9	0.03471	128.5979	ELLENDALE - OAKES 230KV CKT 1	
17SP	16ALL	0	FROM->TO	G16_035	ELLENDALE (ELLENDL TR1) 230/115/13.8KV TRANSFORMER CKT 1	188	0.03471	128.4231	ELLENDALE - OAKES 230KV CKT 1	
17G	16ALL	0	FROM->TO	G16_035	ELLENDALE (ELLENDL TR1) 230/115/13.8KV TRANSFORMER CKT 1	187.7	0.03332	125.1705	FORMAN - OAKES 230KV CKT 1	
17G	16ALL	0	FROM->TO	G16_035	ELLENDALE (ELLENDL TR1) 230/115/13.8KV TRANSFORMER CKT 1	188	0.03332	124.9176	FORMAN - OAKES 230KV CKT 1	
16WP	16ALL	0	FROM->TO	G16_035	ELLENDALE (ELLENDL TR1) 230/115/13.8KV TRANSFORMER CKT 1	187.9	0.034	124.7757	FORMAN - OAKES 230KV CKT 1	
16WP	16ALL	0	FROM->TO	G16_035	ELLENDALE (ELLENDL TR1) 230/115/13.8KV TRANSFORMER CKT 1	188	0.034	124.6562	FORMAN - OAKES 230KV CKT 1	
17SP	16ALL	0	FROM->TO	G16_035	ELLENDALE (ELLENDL TR1) 230/115/13.8KV TRANSFORMER CKT 1	187.9	0.03431	123.9122	FORMAN - OAKES 230KV CKT 1	
17SP	16ALL	0	FROM->TO	G16_035	ELLENDALE (ELLENDL TR1) 230/115/13.8KV TRANSFORMER CKT 1	188	0.03431	123.7931	FORMAN - OAKES 230KV CKT 1	
25SP	16ALL	0	TO->FROM	G16_035	ELLENDLMVP4 230.00 - J316_SUB 230.00 230KV CKT 1	342.5	0.08166	179.6101	ELLENDLMVP4 230.00 - MERRCRT4 230.00 230KV CKT 1	
20SP	16ALL	0	TO->FROM	G16_035	ELLENDLMVP4 230.00 - J316_SUB 230.00 230KV CKT 1	342.5	0.08148	176.2028	ELLENDLMVP4 230.00 - MERRCRT4 230.00 230KV CKT 1	
20WP	16ALL	0	TO->FROM	G16_035	ELLENDLMVP4 230.00 - J316_SUB 230.00 230KV CKT 1	342.9	0.08039	165.9166	ELLENDLMVP4 230.00 - MERRCRT4 230.00 230KV CKT 1	
20L	16ALL	0	TO->FROM	G16_035	ELLENDLMVP4 230.00 - J316_SUB 230.00 230KV CKT 1	342.6	0.07755	152.3311	ELLENDLMVP4 230.00 - MERRCRT4 230.00 230KV CKT 1	
25SP	16ALL	0	TO->FROM	G16_035	ELLENDLMVP4 230.00 - J316_SUB 230.00 230KV CKT 1	342.5	0.05155	130.0347	BUFFALO - JAMESTOWN 345KV CKT 1	
25SP	16ALL	0	TO->FROM	G16_035	ELLENDLMVP4 230.00 - J316_SUB 230.00 230KV CKT 1	342.5	0.04903	128.5459	RIEL - ROSEAU 500KV CKT 1	
25SP	16ALL	0	TO->FROM	G16_035	ELLENDLMVP4 230.00 - J316_SUB 230.00 230KV CKT 1	342.5	0.04903	128.2832	ROSEAU - ROSEAU 2 500.00 500KV CKT 1	
25SP	16ALL	0	TO->FROM	G16_035	ELLENDLMVP4 230.00 - J316_SUB 230.00 230KV CKT 1	342.5	0.04903	128.2832	ROSEAU - ROSEAU 2 500.00 500KV CKT 1	
25SP	16ALL	0	TO->FROM	G16_035	ELLENDLMVP4 230.00 - J316_SUB 230.00 230KV CKT 1	342.5	0.04903	128.0496	FORBES - ROSEAU 500KV CKT 1	
20SP	16ALL	0	TO->FROM	G16_035	ELLENDLMVP4 230.00 - J316_SUB 230.00 230KV CKT 1	342.5	0.05144	127.5534	BUFFALO - JAMESTOWN 345KV CKT 1	
25SP	16ALL	0	TO->FROM	G16_035	ELLENDLMVP4 230.00 - J316_SUB 230.00 230KV CKT 1	342.5	0.05196	127.2888	CENTER - JAMESTOWN 345KV CKT 1	
20SP	16ALL	0	TO->FROM	G16_035	ELLENDLMVP4 230.00 - J316_SUB 230.00 230KV CKT 1	342.5	0.04895	127.0626	RIEL - ROSEAU 500KV CKT 1	
20SP	16ALL	0	TO->FROM	G16_035	ELLENDLMVP4 230.00 - J316_SUB 230.00 230KV CKT 1	342.5	0.04895	126.7998	ROSEAU - ROSEAU 2 500.00 500KV CKT 1	
20SP	16ALL	0	TO->FROM	G16_035	ELLENDLMVP4 230.00 - J316_SUB 230.00 230KV CKT 1	342.5	0.04895	126.7998	ROSEAU - ROSEAU 2 500.00 500KV CKT 1	
25SP	16ALL	0	TO->FROM	G16_035	ELLENDLMVP4 230.00 - J316_SUB 230.00 230KV CKT 1	318.5	0.04687	126.715	System Intact	
20SP	16ALL	0	TO->FROM	G16_035	ELLENDLMVP4 230.00 - J316_SUB 230.00 230KV CKT 1	342.5	0.04895	126.537	FORBES - ROSEAU 500KV CKT 1	
25SP	16ALL	0	TO->FROM	G16_035	ELLENDLMVP4 230.00 - J316_SUB 230.00 230KV CKT 1	342.5	0.05015	125.5219	BISON 3 345.00 - BUFFALO 345KV CKT 1	
20SP	16ALL	0	TO->FROM	G16_035	ELLENDLMVP4 230.00 - J316_SUB 230.00 230KV CKT 1	342.5	0.05186	124.8367	CENTER - JAMESTOWN 345KV CKT 1	
20SP	16ALL	0	TO->FROM	G16_035	ELLENDLMVP4 230.00 - J316_SUB 230.00 230KV CKT 1	318.5	0.04676	124.6119	System Intact	
25SP	16ALL	0	TO->FROM	G16_035	ELLENDLMVP4 230.00 - J316_SUB 230.00 230KV CKT 1	342.5	0.05127	123.5959	P12:345:UMZB:# 109 #: LOS GRT IN ND. LOS GRT	
20SP	16ALL	0	TO->FROM	G16_035	ELLENDLMVP4 230.00 - J316_SUB 230.00 230KV CKT 1	342.5	0.05004	123.2742	BISON 3 345.00 - BUFFALO 345KV CKT 1	
25SP	16ALL	0	TO->FROM	G16_035	ELLENDLMVP4 230.00 - J316_SUB 230.00 230KV CKT 1	342.5	0.04982	123.207	ANTELOP-LNX3345.00 - ANTELOPE VALLEY 345KV CKT Z	
25SP	16ALL	0	TO->FROM	G16_035	ELLENDLMVP4 230.00 - J316_SUB 230.00 230KV CKT 1	342.5	0.04982	123.207	P12:345:UMZB:# 102 #: AVS BD IN ND. AVS BRD LR	
25SP	16ALL	0	TO->FROM	G16_035	ELLENDLMVP4 230.00 - J316_SUB 230.00 230KV CKT 1	342.5	0.04687	122.4488	KELLY - MEADOWGROVE4230.00 230KV CKT 1	
25SP	16ALL	0	TO->FROM	G16_035	ELLENDLMVP4 230.00 - J316_SUB 230.00 230KV CKT 1	342.5	0.04687	122.0985	BIG STONE 230/24.0KV TRANSFORMER CKT 1	
25SP	16ALL	0	TO->FROM	G16_035	ELLENDLMVP4 230.00 - J316_SUB 230.00 230KV CKT 1	342.5	0.05127	121.7184	LELAND OLDS - LELAND1-LNX3345.00 345KV CKT Z	
25SP	16ALL	0	TO->FROM	G16_035	ELLENDLMVP4 230.00 - J316_SUB 230.00 230KV CKT 1	342.5	0.05127	121.5724	G16-044-TAP 345.00 - LELAND1-LNX3345.00 345KV CKT 1	
25SP	16ALL	0	TO->FROM	G16_035	ELLENDLMVP4 230.00 - J316_SUB 230.00 230KV CKT 1	342.5	0.04824	121.5496	CENTER - CNTSHNT3 345.00 345KV CKT Z1	
25SP	16ALL	0	TO->FROM	G16_035	ELLENDLMVP4 230.00 - J316_SUB 230.00 230KV CKT 1	342.5	0.04824	121.5496	CNTSHNT3 345.00 - PRAIRIE3 345.00 345KV CKT 1	

SEASON	GROUP	SCENARIO	DIRECTION	SOURCE	MONITORED ELEMENT	RATE		CONTINGENCY		CONTINGENCY
						(MVA)	TDF	LOADING %		
20SP	16ALL		0 TO->FROM	G16_035	ELLENDLMVP4 230.00 - J316_SUB 230.00 230KV CKT 1	342.5	0.05114	121.4597	P12:345:UMZB:# 109 #: LOS GRT IN ND. LOS GRT	
20SP	16ALL		0 TO->FROM	G16_035	ELLENDLMVP4 230.00 - J316_SUB 230.00 230KV CKT 1	342.5	0.04971	121.1636	ANTELOP-LNX3345.00 - ANTELOPE VALLEY 345KV CKT Z	
20SP	16ALL		0 TO->FROM	G16_035	ELLENDLMVP4 230.00 - J316_SUB 230.00 230KV CKT 1	342.5	0.04971	121.1636	P12:345:UMZB:# 102 #: AVS BD IN ND. AVS BRD LR	
20SP	16ALL		0 TO->FROM	G16_035	ELLENDLMVP4 230.00 - J316_SUB 230.00 230KV CKT 1	342.5	0.04971	121.1636	P12:345:UMZB:# 103 #: BD IN SD. LOSS OF LINE	
20SP	16ALL		0 TO->FROM	G16_035	ELLENDLMVP4 230.00 - J316_SUB 230.00 230KV CKT 1	342.5	0.04971	121.0468	BRDLAND-LNX3345.00 - HURON 345KV CKT Z	
20WP	16ALL		0 TO->FROM	G16_035	ELLENDLMVP4 230.00 - J316_SUB 230.00 230KV CKT 1	342.9	0.0507	120.9997	BUFFALO - JAMESTOWN 345KV CKT 1	
20SP	16ALL		0 TO->FROM	G16_035	ELLENDLMVP4 230.00 - J316_SUB 230.00 230KV CKT 1	342.5	0.04676	120.4639	KELLY - MEADOWGROVE4230.00 230KV CKT 1	
20SP	16ALL		0 TO->FROM	G16_035	ELLENDLMVP4 230.00 - J316_SUB 230.00 230KV CKT 1	342.5	0.04676	120.0843	BIG STONE 230/24.0KV TRANSFORMER CKT 1	
20SP	16ALL		0 TO->FROM	G16_035	ELLENDLMVP4 230.00 - J316_SUB 230.00 230KV CKT 1	342.5	0.05114	119.5822	LELAND OLDS - LELAND1-LNX3345.00 345KV CKT Z	
20SP	16ALL		0 TO->FROM	G16_035	ELLENDLMVP4 230.00 - J316_SUB 230.00 230KV CKT 1	342.5	0.05114	119.4654	G16-044-TAP 345.00 - LELAND1-LNX3345.00 345KV CKT 1	
25SP	16ALL		0 TO->FROM	G16_035	ELLENDLMVP4 230.00 - J316_SUB 230.00 230KV CKT 1	342.5	0.03408	119.2884	GRANTE FALLS - MANDAN 4 230.00 230KV CKT 1	
25SP	16ALL		0 TO->FROM	G16_035	ELLENDLMVP4 230.00 - J316_SUB 230.00 230KV CKT 1	342.5	0.03408	118.5293	BISMARK - GRANTE FALLS 230KV CKT 1	
20WP	16ALL		0 TO->FROM	G16_035	ELLENDLMVP4 230.00 - J316_SUB 230.00 230KV CKT 1	318.9	0.04614	118.1981	System Intact	
20WP	16ALL		0 TO->FROM	G16_035	ELLENDLMVP4 230.00 - J316_SUB 230.00 230KV CKT 1	342.9	0.05111	118.0794	CENTER - JAMESTOWN 345KV CKT 1	
20WP	16ALL		0 TO->FROM	G16_035	ELLENDLMVP4 230.00 - J316_SUB 230.00 230KV CKT 1	342.9	0.04824	116.9912	RIEL - ROSEAU 500KV CKT 1	
20WP	16ALL		0 TO->FROM	G16_035	ELLENDLMVP4 230.00 - J316_SUB 230.00 230KV CKT 1	342.9	0.04824	116.8745	ROSEAU - ROSEAU 2 500.00 500KV CKT 1	
20WP	16ALL		0 TO->FROM	G16_035	ELLENDLMVP4 230.00 - J316_SUB 230.00 230KV CKT 1	342.9	0.04824	116.8745	ROSEAU - ROSEAU 2 500.00 500KV CKT 1	
20SP	16ALL		0 TO->FROM	G16_035	ELLENDLMVP4 230.00 - J316_SUB 230.00 230KV CKT 1	342.5	0.03398	116.8389	GRANTE FALLS - MANDAN 4 230.00 230KV CKT 1	
20WP	16ALL		0 TO->FROM	G16_035	ELLENDLMVP4 230.00 - J316_SUB 230.00 230KV CKT 1	342.9	0.04933	116.8235	BISON 3 345.00 - BUFFALO 345KV CKT 1	
20WP	16ALL		0 TO->FROM	G16_035	ELLENDLMVP4 230.00 - J316_SUB 230.00 230KV CKT 1	342.9	0.04824	116.787	FORBES - ROSEAU 500KV CKT 1	
20SP	16ALL		0 TO->FROM	G16_035	ELLENDLMVP4 230.00 - J316_SUB 230.00 230KV CKT 1	342.5	0.03398	116.1966	BISMARK - GRANTE FALLS 230KV CKT 1	
20WP	16ALL		0 TO->FROM	G16_035	ELLENDLMVP4 230.00 - J316_SUB 230.00 230KV CKT 1	342.9	0.049	114.3336	ANTELOP-LNX3345.00 - ANTELOPE VALLEY 345KV CKT Z	
20WP	16ALL		0 TO->FROM	G16_035	ELLENDLMVP4 230.00 - J316_SUB 230.00 230KV CKT 1	342.9	0.049	114.3336	P12:345:UMZB:# 102 #: AVS BD IN ND. AVS BRD LR	
20WP	16ALL		0 TO->FROM	G16_035	ELLENDLMVP4 230.00 - J316_SUB 230.00 230KV CKT 1	342.9	0.049	114.3336	P12:345:UMZB:# 103 #: BD IN SD. LOSS OF LINE	
20WP	16ALL		0 TO->FROM	G16_035	ELLENDLMVP4 230.00 - J316_SUB 230.00 230KV CKT 1	342.9	0.04614	114.2706	BISON 3 345.00 - BUFFALO 345KV CKT 1	
20WP	16ALL		0 TO->FROM	G16_035	ELLENDLMVP4 230.00 - J316_SUB 230.00 230KV CKT 1	342.9	0.05039	114.2106	P12:345:UMZB:# 109 #: LOS GRT IN ND. LOS GRT	
20WP	16ALL		0 TO->FROM	G16_035	ELLENDLMVP4 230.00 - J316_SUB 230.00 230KV CKT 1	342.9	0.04614	114.0664	BIG STONE 230/24.0KV TRANSFORMER CKT 1	
20WP	16ALL		0 TO->FROM	G16_035	ELLENDLMVP4 230.00 - J316_SUB 230.00 230KV CKT 1	342.9	0.04747	113.7146	CENTER - CNTSHNT3 345.00 345KV CKT Z1	
20WP	16ALL		0 TO->FROM	G16_035	ELLENDLMVP4 230.00 - J316_SUB 230.00 230KV CKT 1	342.9	0.04747	113.7146	CNTSHNT3 345.00 - PRAIRIE3 345.00 345KV CKT 1	
20WP	16ALL		0 TO->FROM	G16_035	ELLENDLMVP4 230.00 - J316_SUB 230.00 230KV CKT 1	342.9	0.05039	112.3062	LELAND OLDS - LELAND1-LNX3345.00 345KV CKT Z	
20WP	16ALL		0 TO->FROM	G16_035	ELLENDLMVP4 230.00 - J316_SUB 230.00 230KV CKT 1	342.9	0.05039	112.2187	G16-044-TAP 345.00 - LELAND1-LNX3345.00 345KV CKT 1	
20WP	16ALL		0 TO->FROM	G16_035	ELLENDLMVP4 230.00 - J316_SUB 230.00 230KV CKT 1	342.9	0.03339	110.891	GRANTE FALLS - MANDAN 4 230.00 230KV CKT 1	
20L	16ALL		0 TO->FROM	G16_035	ELLENDLMVP4 230.00 - J316_SUB 230.00 230KV CKT 1	342.6	0.04846	110.6804	G16-044-TAP 345.00 - GROTON-LNX3 345.00 345KV CKT 1	
20L	16ALL		0 TO->FROM	G16_035	ELLENDLMVP4 230.00 - J316_SUB 230.00 230KV CKT 1	342.6	0.04846	110.6804	GROTON - GROTON-LNX3 345.00 345KV CKT Z	
20L	16ALL		0 TO->FROM	G16_035	ELLENDLMVP4 230.00 - J316_SUB 230.00 230KV CKT 1	318.5	0.04451	109.8195	System Intact	
20L	16ALL		0 TO->FROM	G16_035	ELLENDLMVP4 230.00 - J316_SUB 230.00 230KV CKT 1	342.6	0.04888	109.8013	BUFFALO - JAMESTOWN 345KV CKT 1	
20L	16ALL		0 TO->FROM	G16_035	ELLENDLMVP4 230.00 - J316_SUB 230.00 230KV CKT 1	342.6	0.04655	109.6151	RIEL - ROSEAU 500KV CKT 1	
20L	16ALL		0 TO->FROM	G16_035	ELLENDLMVP4 230.00 - J316_SUB 230.00 230KV CKT 1	342.6	0.04655	109.4983	ROSEAU - ROSEAU 2 500.00 500KV CKT 1	
20L	16ALL		0 TO->FROM	G16_035	ELLENDLMVP4 230.00 - J316_SUB 230.00 230KV CKT 1	342.6	0.04655	109.4983	ROSEAU - ROSEAU 2 500.00 500KV CKT 1	
20L	16ALL		0 TO->FROM	G16_035	ELLENDLMVP4 230.00 - J316_SUB 230.00 230KV CKT 1	342.6	0.04655	109.3816	FORBES - ROSEAU 500KV CKT 1	
20L	16ALL		0 TO->FROM	G16_035	ELLENDLMVP4 230.00 - J316_SUB 230.00 230KV CKT 1	342.6	0.04927	107.5154	CENTER - JAMESTOWN 345KV CKT 1	
20L	16ALL		0 TO->FROM	G16_035	ELLENDLMVP4 230.00 - J316_SUB 230.00 230KV CKT 1	342.6	0.04757	107.0063	BISON 3 345.00 - BUFFALO 345KV CKT 1	
20L	16ALL		0 TO->FROM	G16_035	ELLENDLMVP4 230.00 - J316_SUB 230.00 230KV CKT 1	342.6	0.05657	106.8635	CENTER - SQUARE BUTTE 230KV CKT 1	
20L	16ALL		0 TO->FROM	G16_035	ELLENDLMVP4 230.00 - J316_SUB 230.00 230KV CKT 1	342.6	0.04718	106.4568	ANTELOP-LNX3345.00 - ANTELOPE VALLEY 345KV CKT Z	
20L	16ALL		0 TO->FROM	G16_035	ELLENDLMVP4 230.00 - J316_SUB 230.00 230KV CKT 1	342.6	0.04718	106.4276	P12:345:UMZB:# 102 #: AVS BD IN ND. AVS BRD LR	
20L	16ALL		0 TO->FROM	G16_035	ELLENDLMVP4 230.00 - J316_SUB 230.00 230KV CKT 1	342.6	0.04718	106.4276	P12:345:UMZB:# 103 #: BD IN SD. LOSS OF LINE	
20L	16ALL		0 TO->FROM	G16_035	ELLENDLMVP4 230.00 - J316_SUB 230.00 230KV CKT 1	342.6	0.04718	106.3693	ANTELOP-LNX3345.00 - BRDLAND-LNX3345.00 345KV CKT 1	
20L	16ALL		0 TO->FROM	G16_035	ELLENDLMVP4 230.00 - J316_SUB 230.00 230KV CKT 1	342.6	0.04451	106.2682	BISON 3 345.00 - BUFFALO 345KV CKT 1	
20L	16ALL		0 TO->FROM	G16_035	ELLENDLMVP4 230.00 - J316_SUB 230.00 230KV CKT 1	342.6	0.04451	105.9472	BIG STONE 230/24.0KV TRANSFORMER CKT 1	
20L	16ALL		0 TO->FROM	G16_035	ELLENDLMVP4 230.00 - J316_SUB 230.00 230KV CKT 1	342.6	0.04846	105.8671	P12:345:UMZB:# 109 #: LOS GRT IN ND. LOS GRT	
20L	16ALL		0 TO->FROM	G16_035	ELLENDLMVP4 230.00 - J316_SUB 230.00 230KV CKT 1	342.6	0.04846	103.9318	LELAND OLDS - LELAND1-LNX3345.00 345KV CKT Z	
20L	16ALL		0 TO->FROM	G16_035	ELLENDLMVP4 230.00 - J316_SUB 230.00 230KV CKT 1	342.6	0.04846	103.8735	G16-044-TAP 345.00 - LELAND1-LNX3345.00 345KV CKT 1	
25SP	16ALL		0 TO->FROM	G16_035	ELLENDLMVP4 230.00 - MERRCRT4 230.00 230KV CKT 1	382.1	0.07988	153.6597	ELLENDLMVP4 230.00 - J316_SUB 230.00 230KV CKT 1	
20SP	16ALL		0 TO->FROM	G16_035	ELLENDLMVP4 230.00 - MERRCRT4 230.00 230KV CKT 1	382.1	0.0797	150.6864	ELLENDLMVP4 230.00 - J316_SUB 230.00 230KV CKT 1	
20WP	16ALL		0 TO->FROM	G16_035	ELLENDLMVP4 230.00 - MERRCRT4 230.00 230KV CKT 1	382.6	0.07863	141.6401	ELLENDLMVP4 230.00 - J316_SUB 230.00 230KV CKT 1	

SEASON	GROUP	SCENARIO	DIRECTION	SOURCE	MONITORED ELEMENT	RATE		CONTINGENCY		CONTINGENCY
						(MVA)	TDF	LOADING %		
20L	16ALL		0 TO->FROM	G16_035	ELLENDLMVP4 230.00 - MERRCRT4 230.00 230KV CKT 1	382.6	0.07586	129.6226	ELLENDLMVP4 230.00 - J316_SUB 230.00 230KV CKT 1	
25SP	16ALL		0 TO->FROM	G16_035	ELLENDLMVP4 230.00 - MERRCRT4 230.00 230KV CKT 1	382.1	0.07988	120.7626	J316_SUB 230.00 - TATANKA 230KV CKT 1	
20SP	16ALL		0 TO->FROM	G16_035	ELLENDLMVP4 230.00 - MERRCRT4 230.00 230KV CKT 1	382.1	0.0797	117.7369	J316_SUB 230.00 - TATANKA 230KV CKT 1	
20WP	16ALL		0 TO->FROM	G16_035	ELLENDLMVP4 230.00 - MERRCRT4 230.00 230KV CKT 1	382.6	0.07863	108.6814	J316_SUB 230.00 - TATANKA 230KV CKT 1	
25SP	16ALL		0 FROM->TO	G16_035	ELLENDLMVP4 230.00 - OAKES 230KV CKT 1	350.2	0.04846	126.0714	ELLENDLMVP3 345.00 (1) 345/230/34.5KV TRANSFORMER CKT 1	
25SP	16ALL		0 FROM->TO	G16_035	ELLENDLMVP4 230.00 - OAKES 230KV CKT 1	350.2	0.04846	125.1862	BSSOUTH3 345.00 - ELLENDLMVP3 345.00 345KV CKT 1	
20SP	16ALL		0 FROM->TO	G16_035	ELLENDLMVP4 230.00 - OAKES 230KV CKT 1	349.9	0.04831	123.3118	ELLENDLMVP3 345.00 (1) 345/230/34.5KV TRANSFORMER CKT 1	
20SP	16ALL		0 FROM->TO	G16_035	ELLENDLMVP4 230.00 - OAKES 230KV CKT 1	349.9	0.04831	122.483	BSSOUTH3 345.00 - ELLENDLMVP3 345.00 345KV CKT 1	
20WP	16ALL		0 FROM->TO	G16_035	ELLENDLMVP4 230.00 - OAKES 230KV CKT 1	350.9	0.04753	118.2017	ELLENDLMVP3 345.00 (1) 345/230/34.5KV TRANSFORMER CKT 1	
20WP	16ALL		0 FROM->TO	G16_035	ELLENDLMVP4 230.00 - OAKES 230KV CKT 1	350.9	0.04753	117.6032	BSSOUTH3 345.00 - ELLENDLMVP3 345.00 345KV CKT 1	
20L	16ALL		0 FROM->TO	G16_035	ELLENDLMVP4 230.00 - OAKES 230KV CKT 1	349.3	0.0461	102.087	ELLENDLMVP3 345.00 (1) 345/230/34.5KV TRANSFORMER CKT 1	
20L	16ALL		0 FROM->TO	G16_035	ELLENDLMVP4 230.00 - OAKES 230KV CKT 1	349.3	0.0461	101.4572	BSSOUTH3 345.00 - ELLENDLMVP3 345.00 345KV CKT 1	
25SP	16ALL		0 FROM->TO	G16_035	FARGO - SHEYNNE 230KV CKT 1	328	0.11303	155.1112	BUFFALO - JAMESTOWN 345KV CKT 1	
20SP	16ALL		0 FROM->TO	G16_035	FARGO - SHEYNNE 230KV CKT 1	332.6	0.1131	149.9894	BUFFALO - JAMESTOWN 345KV CKT 1	
17SP	16ALL		0 FROM->TO	G16_035	FARGO - SHEYNNE 230KV CKT 1	329.7	0.11391	146.5834	BUFFALO - JAMESTOWN 345KV CKT 1	
25SP	16ALL		0 FROM->TO	G16_035	FARGO - SHEYNNE 230KV CKT 1	328	0.11319	131.7989	CENTER - JAMESTOWN 345KV CKT 1	
20SP	16ALL		0 FROM->TO	G16_035	FARGO - SHEYNNE 230KV CKT 1	332.6	0.11325	127.2701	CENTER - JAMESTOWN 345KV CKT 1	
17SP	16ALL		0 FROM->TO	G16_035	FARGO - SHEYNNE 230KV CKT 1	329.7	0.11383	126.1632	CENTER - JAMESTOWN 345KV CKT 1	
25SP	16ALL		0 FROM->TO	G16_035	FARGO - SHEYNNE 230KV CKT 1	328	0.10167	119.0711	BISON 3 345.00 - BUFFALO 345KV CKT 1	
20SP	16ALL		0 FROM->TO	G16_035	FARGO - SHEYNNE 230KV CKT 1	332.6	0.10171	116.0085	BISON 3 345.00 - BUFFALO 345KV CKT 1	
17SP	16ALL		0 FROM->TO	G16_035	FARGO - SHEYNNE 230KV CKT 1	329.7	0.10214	112.597	BISON 3 345.00 - BUFFALO 345KV CKT 1	
20SP	16ALL		0 FROM->TO	G16_035	FARGO - SHEYNNE 230KV CKT 1	332.6	0.08884	103.8895	RIEL - ROSEAU 500KV CKT 1	
20SP	16ALL		0 FROM->TO	G16_035	FARGO - SHEYNNE 230KV CKT 1	332.6	0.08884	103.1378	ROSEAU - ROSEAUM 2 500.00 500KV CKT 1	
20SP	16ALL		0 FROM->TO	G16_035	FARGO - SHEYNNE 230KV CKT 1	332.6	0.08884	103.1378	ROSEAU - ROSEAUM 2 500.00 500KV CKT 1	
20SP	16ALL		0 FROM->TO	G16_035	FARGO - SHEYNNE 230KV CKT 1	332.6	0.08884	102.3561	FORBES - ROSEAU 500KV CKT 1	
25SP	16ALL		0 FROM->TO	G16_035	FARGO - SHEYNNE 230KV CKT 1	328	0.08852	102.2349	RIEL - ROSEAU 500KV CKT 1	
25SP	16ALL		0 FROM->TO	G16_035	FARGO - SHEYNNE 230KV CKT 1	328	0.08852	101.5642	ROSEAU - ROSEAUM 2 500.00 500KV CKT 1	
25SP	16ALL		0 FROM->TO	G16_035	FARGO - SHEYNNE 230KV CKT 1	328	0.08852	101.5642	ROSEAU - ROSEAUM 2 500.00 500KV CKT 1	
17SP	16ALL		0 FROM->TO	G16_035	FARGO - SHEYNNE 230KV CKT 1	329.7	0.08902	101.5493	RIEL - ROSEAU 500KV CKT 1	
25SP	16ALL		0 FROM->TO	G16_035	FARGO - SHEYNNE 230KV CKT 1	328	0.08852	100.8934	FORBES - ROSEAU 500KV CKT 1	
17SP	16ALL		0 FROM->TO	G16_035	FARGO - SHEYNNE 230KV CKT 1	329.7	0.08902	100.7607	ROSEAU - ROSEAUM 2 500.00 500KV CKT 1	
17SP	16ALL		0 FROM->TO	G16_035	FARGO - SHEYNNE 230KV CKT 1	329.7	0.08902	100.7607	ROSEAU - ROSEAUM 2 500.00 500KV CKT 1	
17SP	16ALL		0 FROM->TO	G16_035	FERGSFL4 230.00 - GRE-SILVRLK4230.00 230KV CKT 1	270.2	0.0307	105.9802	RIEL - ROSEAU 500KV CKT 1	
17SP	16ALL		0 FROM->TO	G16_035	FERGSFL4 230.00 - GRE-SILVRLK4230.00 230KV CKT 1	270.2	0.0307	105.425	ROSEAU - ROSEAUM 2 500.00 500KV CKT 1	
17SP	16ALL		0 FROM->TO	G16_035	FERGSFL4 230.00 - GRE-SILVRLK4230.00 230KV CKT 1	270.2	0.0307	105.425	ROSEAU - ROSEAUM 2 500.00 500KV CKT 1	
17SP	16ALL		0 FROM->TO	G16_035	FERGSFL4 230.00 - GRE-SILVRLK4230.00 230KV CKT 1	270.2	0.0307	104.8329	FORBES - ROSEAU 500KV CKT 1	
17SP	16ALL		0 FROM->TO	G16_035	FERGSFL4 230.00 - GRE-SILVRLK4230.00 230KV CKT 1	270.2	0.03833	100.9231	ALEXMRES3 345.00 - BISON 3 345.00 345KV CKT 1	
17SP	16ALL		0 FROM->TO	G16_035	FERGSFL4 230.00 - GRE-SILVRLK4230.00 230KV CKT 1	270.2	0.03092	100.1164	P12:230:UMZW:# 1770 #: FB IN SD. FB-BIGSTONE LINE FAULT	
17SP	16ALL		0 TO->FROM	G16_035	FORMAN - OAKES 230KV CKT 1	446.8	0.05475	103.162	BUFFALO - JAMESTOWN 345KV CKT 1	
17G	16ALL		0 TO->FROM	G16_035	FORMAN - OAKES 230KV CKT 1	446.2	0.05456	102.2317	BUFFALO - JAMESTOWN 345KV CKT 1	
17G	16ALL		0 TO->FROM	G16_035	FORMAN - OAKES 230KV CKT 1	446.2	0.05679	101.4186	ELLENDALE (ELLENDL TR1) 230/115/13.8KV TRANSFORMER CKT 1	
17SP	16ALL		0 TO->FROM	G16_035	FORMAN - OAKES 230KV CKT 1	446.8	0.05743	101.2112	ELLENDALE (ELLENDL TR1) 230/115/13.8KV TRANSFORMER CKT 1	
17G	16ALL		0 TO->FROM	G16_035	FORMAN - OAKES 230KV CKT 1	446.2	0.05679	100.0067	ABERDEEN JCT - ELLENDALE 115KV CKT 1	
17G	16ALL		0 TO->FROM	G16_035	FORMAN - OAKES 230KV CKT 1	446.2	0.05679	100.0067	P12:115:UMZZ:# 232 #: AB IN SD. ABERDEEN A TAP BETWEEN ELLENDALE AND ABERDEEN-SIEBRECHT.	
17SP	16ALL		0 FROM->TO	G16_035	GRE-SILVRLK4230.00 - HENNING 230KV CKT 1	269.1	0.0307	101.6197	RIEL - ROSEAU 500KV CKT 1	
17SP	16ALL		0 FROM->TO	G16_035	GRE-SILVRLK4230.00 - HENNING 230KV CKT 1	269.1	0.0307	101.0251	ROSEAU - ROSEAUM 2 500.00 500KV CKT 1	
17SP	16ALL		0 FROM->TO	G16_035	GRE-SILVRLK4230.00 - HENNING 230KV CKT 1	269.1	0.0307	101.0251	ROSEAU - ROSEAUM 2 500.00 500KV CKT 1	
17SP	16ALL		0 FROM->TO	G16_035	GRE-SILVRLK4230.00 - HENNING 230KV CKT 1	269.1	0.0307	100.4305	FORBES - ROSEAU 500KV CKT 1	
25SP	16ALL		0 FROM->TO	G16_035	HESKETT - MANDAN 7 115.00 115KV CKT 1	130.8	0.0445	113.4703	BISMARCK EXPRESSWAY - EAST BISMARCK 115KV CKT 1	
25SP	16ALL		0 FROM->TO	G16_035	HESKETT - MANDAN 7 115.00 115KV CKT 1	130.8	0.04035	113.232	HESKETT (HESKETT TR1) 230/115/13.8KV TRANSFORMER CKT 1	
25SP	16ALL		0 FROM->TO	G16_035	HESKETT - MANDAN 7 115.00 115KV CKT 1	130.8	0.0445	105.825	BISMARCK EXPRESSWAY - STH9TH 7 115.00 115KV CKT 1	
20SP	16ALL		0 FROM->TO	G16_035	HESKETT - MANDAN 7 115.00 115KV CKT 1	130.8	0.0445	101.5437	BISMARCK EXPRESSWAY - EAST BISMARCK 115KV CKT 1	
25SP	16ALL		0 FROM->TO	G16_035	HESKETT - WISHEK 230KV CKT 1	256.9	0.09534	104.1347	BUFFALO - JAMESTOWN 345KV CKT 1	
25SP	16ALL		0 FROM->TO	G16_035	HESKETT - WISHEK 230KV CKT 1	256.9	0.09069	100.4288	RIEL - ROSEAU 500KV CKT 1	
25SP	16ALL		0 FROM->TO	G16_035	HESKETT (HESKETT TR1) 230/115/13.8KV TRANSFORMER CKT 1	124.3	0.06849	116.554	HESKETT - MANDAN 4 230.00 230KV CKT 1	

SEASON	GROUP	SCENARIO	DIRECTION	SOURCE	MONITORED ELEMENT	RATE		CONTINGENCY		CONTINGENCY
						(MVA)	TDF	LOADING %		
25SP	16ALL	0	FROM->TO	G16_035	HESKETT (HESKETT TR1) 230/115/13.8KV TRANSFORMER CKT 1	124.4	0.06849	116.4603	HESKETT - MANDAN 4 230.00 230KV CKT 1	
20SP	16ALL	0	FROM->TO	G16_035	HESKETT (HESKETT TR1) 230/115/13.8KV TRANSFORMER CKT 1	124.4	0.06835	107.2688	HESKETT - MANDAN 4 230.00 230KV CKT 1	
20SP	16ALL	0	FROM->TO	G16_035	HESKETT (HESKETT TR1) 230/115/13.8KV TRANSFORMER CKT 1	124.4	0.06835	107.2688	HESKETT - MANDAN 4 230.00 230KV CKT 1	
25SP	16ALL	0	TO->FROM	G16_035	J316_SUB 230.00 - TATANKA 230KV CKT 1	341.6	0.08166	137.0505	ELLENDLMVP4 230.00 - MERRCRT4 230.00 230KV CKT 1	
20SP	16ALL	0	TO->FROM	G16_035	J316_SUB 230.00 - TATANKA 230KV CKT 1	341.5	0.08148	133.6148	ELLENDLMVP4 230.00 - MERRCRT4 230.00 230KV CKT 1	
20WP	16ALL	0	TO->FROM	G16_035	J316_SUB 230.00 - TATANKA 230KV CKT 1	342.1	0.08039	123.2178	ELLENDLMVP4 230.00 - MERRCRT4 230.00 230KV CKT 1	
20L	16ALL	0	TO->FROM	G16_035	J316_SUB 230.00 - TATANKA 230KV CKT 1	342.3	0.07755	109.3153	ELLENDLMVP4 230.00 - MERRCRT4 230.00 230KV CKT 1	
17G	16ALL	0	TO->FROM	G16_035	J316_SUB 230.00 - TATANKA 230KV CKT 1	342.9	0.06116	102.0143	ELLENDALE - MERRCRT4 230.00 230KV CKT 1	
17SP	16ALL	0	TO->FROM	G16_035	J316_SUB 230.00 - TATANKA 230KV CKT 1	343	0.06212	101.363	ELLENDALE - MERRCRT4 230.00 230KV CKT 1	
17SP	16ALL	0	TO->FROM	G16_035	KARLSTAD - WINGER 230KV CKT 1	286.3	0.04864	121.2703	RIEL - ROSEAU 500KV CKT 1	
17SP	16ALL	0	TO->FROM	G16_035	KARLSTAD - WINGER 230KV CKT 1	286.3	0.04864	119.8382	ROSEAU - ROSEAU 2 500.00 500KV CKT 1	
17SP	16ALL	0	TO->FROM	G16_035	KARLSTAD - WINGER 230KV CKT 1	286.3	0.04864	119.8382	ROSEAU - ROSEAU 2 500.00 500KV CKT 1	
20SP	16ALL	0	TO->FROM	G16_035	KARLSTAD - WINGER 230KV CKT 1	285.6	0.04543	118.7752	RIEL - ROSEAU 500KV CKT 1	
17SP	16ALL	0	TO->FROM	G16_035	KARLSTAD - WINGER 230KV CKT 1	286.3	0.04864	118.3363	FORBES - ROSEAU 500KV CKT 1	
20SP	16ALL	0	TO->FROM	G16_035	KARLSTAD - WINGER 230KV CKT 1	285.6	0.04543	117.4097	ROSEAU - ROSEAU 2 500.00 500KV CKT 1	
20SP	16ALL	0	TO->FROM	G16_035	KARLSTAD - WINGER 230KV CKT 1	285.6	0.04543	117.4097	ROSEAU - ROSEAU 2 500.00 500KV CKT 1	
20SP	16ALL	0	TO->FROM	G16_035	KARLSTAD - WINGER 230KV CKT 1	285.6	0.04543	115.9741	FORBES - ROSEAU 500KV CKT 1	
25SP	16ALL	0	TO->FROM	G16_035	KARLSTAD - WINGER 230KV CKT 1	285.6	0.04648	113.0443	RIEL - ROSEAU 500KV CKT 1	
25SP	16ALL	0	TO->FROM	G16_035	KARLSTAD - WINGER 230KV CKT 1	285.6	0.04648	111.6787	ROSEAU - ROSEAU 2 500.00 500KV CKT 1	
25SP	16ALL	0	TO->FROM	G16_035	KARLSTAD - WINGER 230KV CKT 1	285.6	0.04648	111.6787	ROSEAU - ROSEAU 2 500.00 500KV CKT 1	
25SP	16ALL	0	TO->FROM	G16_035	KARLSTAD - WINGER 230KV CKT 1	285.6	0.04648	110.3132	FORBES - ROSEAU 500KV CKT 1	
17G	16ALL	0	TO->FROM	G16_035	KARLSTAD - WINGER 230KV CKT 1	285.3	0.04827	109.8692	RIEL - ROSEAU 500KV CKT 1	
17G	16ALL	0	TO->FROM	G16_035	KARLSTAD - WINGER 230KV CKT 1	285.3	0.04827	108.8878	ROSEAU - ROSEAU 2 500.00 500KV CKT 1	
17G	16ALL	0	TO->FROM	G16_035	KARLSTAD - WINGER 230KV CKT 1	285.3	0.04827	108.8878	ROSEAU - ROSEAU 2 500.00 500KV CKT 1	
17G	16ALL	0	TO->FROM	G16_035	KARLSTAD - WINGER 230KV CKT 1	285.3	0.04827	107.9414	FORBES - ROSEAU 500KV CKT 1	
17SP	16ALL	0	FROM->TO	G16_035	PRAIRIE - WINGER 230KV CKT 1	400	0.04999	120.424	RIEL - ROSEAU 500KV CKT 1	
20SP	16ALL	0	FROM->TO	G16_035	PRAIRIE - WINGER 230KV CKT 1	400	0.04838	119.0645	RIEL - ROSEAU 500KV CKT 1	
17SP	16ALL	0	FROM->TO	G16_035	PRAIRIE - WINGER 230KV CKT 1	400	0.04999	118.924	ROSEAU - ROSEAU 2 500.00 500KV CKT 1	
17SP	16ALL	0	FROM->TO	G16_035	PRAIRIE - WINGER 230KV CKT 1	400	0.04999	118.924	ROSEAU - ROSEAU 2 500.00 500KV CKT 1	
20SP	16ALL	0	FROM->TO	G16_035	PRAIRIE - WINGER 230KV CKT 1	400	0.04838	117.5895	ROSEAU - ROSEAU 2 500.00 500KV CKT 1	
20SP	16ALL	0	FROM->TO	G16_035	PRAIRIE - WINGER 230KV CKT 1	400	0.04838	117.5895	ROSEAU - ROSEAU 2 500.00 500KV CKT 1	
17SP	16ALL	0	FROM->TO	G16_035	PRAIRIE - WINGER 230KV CKT 1	400	0.04999	117.3491	FORBES - ROSEAU 500KV CKT 1	
20SP	16ALL	0	FROM->TO	G16_035	PRAIRIE - WINGER 230KV CKT 1	400	0.04838	116.0645	FORBES - ROSEAU 500KV CKT 1	
25SP	16ALL	0	FROM->TO	G16_035	PRAIRIE - WINGER 230KV CKT 1	399.9	0.04641	113.8943	RIEL - ROSEAU 500KV CKT 1	
25SP	16ALL	0	FROM->TO	G16_035	PRAIRIE - WINGER 230KV CKT 1	399.9	0.04641	112.644	ROSEAU - ROSEAU 2 500.00 500KV CKT 1	
25SP	16ALL	0	FROM->TO	G16_035	PRAIRIE - WINGER 230KV CKT 1	399.9	0.04641	112.644	ROSEAU - ROSEAU 2 500.00 500KV CKT 1	
25SP	16ALL	0	FROM->TO	G16_035	PRAIRIE - WINGER 230KV CKT 1	399.9	0.04641	111.3937	FORBES - ROSEAU 500KV CKT 1	
17G	16ALL	0	FROM->TO	G16_035	PRAIRIE - WINGER 230KV CKT 1	399.8	0.04943	102.9958	RIEL - ROSEAU 500KV CKT 1	
17G	16ALL	0	FROM->TO	G16_035	PRAIRIE - WINGER 230KV CKT 1	399.8	0.04943	101.9953	ROSEAU - ROSEAU 2 500.00 500KV CKT 1	
17G	16ALL	0	FROM->TO	G16_035	PRAIRIE - WINGER 230KV CKT 1	399.8	0.04943	101.9953	ROSEAU - ROSEAU 2 500.00 500KV CKT 1	
17G	16ALL	0	FROM->TO	G16_035	PRAIRIE - WINGER 230KV CKT 1	399.8	0.04943	100.9948	FORBES - ROSEAU 500KV CKT 1	
20SP	16ALL	0	TO->FROM	G16_035	SPLIT ROCK - WHITE 345KV CKT 1	713.7	0.12872	126.7015	BROOKING COUNTY - LYON COUNTY 345KV CKT 1	
25SP	16ALL	0	TO->FROM	G16_035	SPLIT ROCK - WHITE 345KV CKT 1	714.1	0.12956	125.8409	BROOKING COUNTY - LYON COUNTY 345KV CKT 1	
20WP	16ALL	0	TO->FROM	G16_035	SPLIT ROCK - WHITE 345KV CKT 1	713.7	0.12399	111.1874	BROOKING COUNTY - LYON COUNTY 345KV CKT 1	
20SP	16ALL	0	TO->FROM	G16_035	SPLIT ROCK - WHITE 345KV CKT 1	713.7	0.13001	109.9848	P12:345:UMZB# 108 #: LOS FT IN ND. LOS FT	
20SP	16ALL	0	TO->FROM	G16_035	SPLIT ROCK - WHITE 345KV CKT 1	713.7	0.13001	109.9428	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z	
20SP	16ALL	0	TO->FROM	G16_035	SPLIT ROCK - WHITE 345KV CKT 1	713.7	0.13001	109.7186	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1	
20SP	16ALL	0	TO->FROM	G16_035	SPLIT ROCK - WHITE 345KV CKT 1	713.7	0.13001	109.6906	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z	
20SP	16ALL	0	TO->FROM	G16_035	SPLIT ROCK - WHITE 345KV CKT 1	713.7	0.13001	109.6906	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1	
20SP	16ALL	0	TO->FROM	G16_035	SPLIT ROCK - WHITE 345KV CKT 1	713.7	0.11798	109.4832	EMMETE.TAP 7115.00 - ONEILL 115KV CKT 1	
20SP	16ALL	0	TO->FROM	G16_035	SPLIT ROCK - WHITE 345KV CKT 1	713.7	0.12116	109.3249	RIEL - ROSEAU 500KV CKT 1	
17SP	16ALL	0	TO->FROM	G16_035	SPLIT ROCK - WHITE 345KV CKT 1	714.3	0.10521	109.2848	BROOKING COUNTY - LYON COUNTY 345KV CKT 1	
20SP	16ALL	0	TO->FROM	G16_035	SPLIT ROCK - WHITE 345KV CKT 1	713.7	0.12116	109.1428	ROSEAU - ROSEAU 2 500.00 500KV CKT 1	
20SP	16ALL	0	TO->FROM	G16_035	SPLIT ROCK - WHITE 345KV CKT 1	713.7	0.12116	109.1428	ROSEAU - ROSEAU 2 500.00 500KV CKT 1	
20SP	16ALL	0	TO->FROM	G16_035	SPLIT ROCK - WHITE 345KV CKT 1	713.7	0.12116	108.9606	FORBES - ROSEAU 500KV CKT 1	

SEASON	GROUP	SCENARIO	DIRECTION	SOURCE	MONITORED ELEMENT	RATE		CONTINGENCY		CONTINGENCY
						(MVA)	TDF	LOADING %		
20SP	16ALL	0	TO->FROM	G16_035	SPLIT ROCK - WHITE 345KV CKT 1	713.7	0.1284	108.5916	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	
20SP	16ALL	0	TO->FROM	G16_035	SPLIT ROCK - WHITE 345KV CKT 1	713.7	0.1284	108.5496	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	
25SP	16ALL	0	TO->FROM	G16_035	SPLIT ROCK - WHITE 345KV CKT 1	714.1	0.13077	108.2973	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT	
25SP	16ALL	0	TO->FROM	G16_035	SPLIT ROCK - WHITE 345KV CKT 1	714.1	0.13077	108.2413	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z	
20SP	16ALL	0	TO->FROM	G16_035	SPLIT ROCK - WHITE 345KV CKT 1	713.7	0.12289	108.1932	HANLON - STORLA 230KV CKT 1	
25SP	16ALL	0	TO->FROM	G16_035	SPLIT ROCK - WHITE 345KV CKT 1	714.1	0.13077	108.0032	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1	
20SP	16ALL	0	TO->FROM	G16_035	SPLIT ROCK - WHITE 345KV CKT 1	713.7	0.1228	107.9843	P12:230:UMZB:# 116 #: ST IN SD. WSG-ST-VH	
25SP	16ALL	0	TO->FROM	G16_035	SPLIT ROCK - WHITE 345KV CKT 1	714.1	0.13077	107.9752	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z	
25SP	16ALL	0	TO->FROM	G16_035	SPLIT ROCK - WHITE 345KV CKT 1	714.1	0.13077	107.9752	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1	
20SP	16ALL	0	TO->FROM	G16_035	SPLIT ROCK - WHITE 345KV CKT 1	713.7	0.11798	107.8859	P13:345:UMZB:# 244 #: BD IN SD. LOSS OF TX	
20SP	16ALL	0	TO->FROM	G16_035	SPLIT ROCK - WHITE 345KV CKT 1	713.7	0.1284	107.7789	FT THOMPSON - FTTHOM2-LNX3345.00 345KV CKT Z	
20SP	16ALL	0	TO->FROM	G16_035	SPLIT ROCK - WHITE 345KV CKT 1	713.7	0.1284	107.6668	GRPRAR2-LNX3345.00 - YANKTON 345KV CKT Z	
25SP	16ALL	0	TO->FROM	G16_035	SPLIT ROCK - WHITE 345KV CKT 1	714.1	0.11871	107.4841	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT	
20SP	16ALL	0	TO->FROM	G16_035	SPLIT ROCK - WHITE 345KV CKT 1	713.7	0.11798	107.2974	COYOTE - WSTMD1 7 115.00 115KV CKT 1	
20SP	16ALL	0	TO->FROM	G16_035	SPLIT ROCK - WHITE 345KV CKT 1	713.7	0.11798	107.2694	RAUN 345/24.0KV TRANSFORMER CKT 1	
25SP	16ALL	0	TO->FROM	G16_035	SPLIT ROCK - WHITE 345KV CKT 1	714.1	0.1219	107.2432	RIEL - ROSEAU 500KV CKT 1	
25SP	16ALL	0	TO->FROM	G16_035	SPLIT ROCK - WHITE 345KV CKT 1	714.1	0.1219	107.0611	ROSEAU - ROSEAUM 2 500.00 500KV CKT 1	
25SP	16ALL	0	TO->FROM	G16_035	SPLIT ROCK - WHITE 345KV CKT 1	714.1	0.1219	107.0611	ROSEAU - ROSEAUM 2 500.00 500KV CKT 1	
25SP	16ALL	0	TO->FROM	G16_035	SPLIT ROCK - WHITE 345KV CKT 1	714.1	0.12918	106.8933	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	
25SP	16ALL	0	TO->FROM	G16_035	SPLIT ROCK - WHITE 345KV CKT 1	714.1	0.1219	106.8931	FORBES - ROSEAU 500KV CKT 1	
25SP	16ALL	0	TO->FROM	G16_035	SPLIT ROCK - WHITE 345KV CKT 1	714.1	0.12918	106.8513	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	
25SP	16ALL	0	TO->FROM	G16_035	SPLIT ROCK - WHITE 345KV CKT 1	714.1	0.12366	106.3819	HANLON - STORLA 230KV CKT 1	
25SP	16ALL	0	TO->FROM	G16_035	SPLIT ROCK - WHITE 345KV CKT 1	714.1	0.12357	106.1591	P12:230:UMZB:# 116 #: ST IN SD. WSG-ST-VH	
25SP	16ALL	0	TO->FROM	G16_035	SPLIT ROCK - WHITE 345KV CKT 1	714.1	0.12918	106.0951	FT THOMPSON - FTTHOM2-LNX3345.00 345KV CKT Z	
25SP	16ALL	0	TO->FROM	G16_035	SPLIT ROCK - WHITE 345KV CKT 1	714.1	0.12918	105.9691	FTTHOM2-LNX3345.00 - GRPRAR2-LNX3345.00 345KV CKT 1	
25SP	16ALL	0	TO->FROM	G16_035	SPLIT ROCK - WHITE 345KV CKT 1	714.1	0.12918	105.9691	GRPRAR2-LNX3345.00 - YANKTON 345KV CKT Z	
25SP	16ALL	0	TO->FROM	G16_035	SPLIT ROCK - WHITE 345KV CKT 1	714.1	0.11871	105.8457	P12:230:UMZB:# 117 #: WK IN SD. SB-WK-GH	
25SP	16ALL	0	TO->FROM	G16_035	SPLIT ROCK - WHITE 345KV CKT 1	714.1	0.11871	105.3836	RAUN 345/24.0KV TRANSFORMER CKT 1	
20L	16ALL	0	TO->FROM	G16_035	SPLIT ROCK - WHITE 345KV CKT 1	713.1	0.1237	102.5068	BROOKING COUNTY - LYON COUNTY 345KV CKT 1	
17SP	16ALL	0	TO->FROM	G16_035	SPLIT ROCK - WHITE 345KV CKT 1	714.3	0.12047	101.1177	LAKEFIELD 3 - LKFLDXL3 345KV CKT 1	
25SP	16ALL	2	TO->FROM	G16_035	ARROWHEAD - FORBES 230KV CKT 1	525.6	0.04261	102.2037	CHISAGO COUNTY - FORBES 500KV CKT 1	
25SP	16ALL	2	TO->FROM	G16_035	ARROWHEAD - FORBES 230KV CKT 1	525.6	0.04261	101.5569	CHISAGO COUNTY - CHISAGO COUNTY 500KV CKT 1	
17SP	16ALL	2	TO->FROM	G16_035	ARROWHEAD - FORBES 230KV CKT 1	525.7	0.04538	101.547	CHISAGO COUNTY - FORBES 500KV CKT 1	
17SP	16ALL	2	TO->FROM	G16_035	ARROWHEAD - FORBES 230KV CKT 1	525.7	0.04538	100.8051	CHISAGO COUNTY - CHISAGO COUNTY 500KV CKT 1	
17SP	16ALL	2	TO->FROM	G16_035	AUDUBON - SHEYNE 230KV CKT 1	278.7	0.05351	112.9768	ALEXMRES3 345.00 - BISON 3 345.00 345KV CKT 1	
17SP	16ALL	2	TO->FROM	G16_035	AUDUBON - SHEYNE 230KV CKT 1	278.7	0.04137	112.6097	RIEL - ROSEAU 500KV CKT 1	
17SP	16ALL	2	TO->FROM	G16_035	AUDUBON - SHEYNE 230KV CKT 1	278.7	0.04137	111.928	ROSEAU - ROSEAUM 2 500.00 500KV CKT 1	
17SP	16ALL	2	TO->FROM	G16_035	AUDUBON - SHEYNE 230KV CKT 1	278.7	0.04137	111.928	ROSEAU - ROSEAUM 2 500.00 500KV CKT 1	
17SP	16ALL	2	TO->FROM	G16_035	AUDUBON - SHEYNE 230KV CKT 1	278.7	0.04137	111.2462	FORBES - ROSEAU 500KV CKT 1	
25SP	16ALL	2	TO->FROM	G16_035	AUDUBON - SHEYNE 230KV CKT 1	278.4	0.05104	110.4596	ALEXMRES3 345.00 - BISON 3 345.00 345KV CKT 1	
25SP	16ALL	2	TO->FROM	G16_035	AUDUBON - SHEYNE 230KV CKT 1	278.4	0.03965	109.691	RIEL - ROSEAU 500KV CKT 1	
25SP	16ALL	2	TO->FROM	G16_035	AUDUBON - SHEYNE 230KV CKT 1	278.4	0.03965	109.1163	ROSEAU - ROSEAUM 2 500.00 500KV CKT 1	
25SP	16ALL	2	TO->FROM	G16_035	AUDUBON - SHEYNE 230KV CKT 1	278.4	0.03965	109.1163	ROSEAU - ROSEAUM 2 500.00 500KV CKT 1	
20SP	16ALL	2	TO->FROM	G16_035	AUDUBON - SHEYNE 230KV CKT 1	278.7	0.03941	108.9999	RIEL - ROSEAU 500KV CKT 1	
25SP	16ALL	2	TO->FROM	G16_035	AUDUBON - SHEYNE 230KV CKT 1	278.4	0.03965	108.4697	FORBES - ROSEAU 500KV CKT 1	
20SP	16ALL	2	TO->FROM	G16_035	AUDUBON - SHEYNE 230KV CKT 1	278.7	0.0508	108.4369	ALEXMRES3 345.00 - BISON 3 345.00 345KV CKT 1	
20SP	16ALL	2	TO->FROM	G16_035	AUDUBON - SHEYNE 230KV CKT 1	278.7	0.03941	108.3541	ROSEAU - ROSEAUM 2 500.00 500KV CKT 1	
20SP	16ALL	2	TO->FROM	G16_035	AUDUBON - SHEYNE 230KV CKT 1	278.7	0.03941	108.3541	ROSEAU - ROSEAUM 2 500.00 500KV CKT 1	
20SP	16ALL	2	TO->FROM	G16_035	AUDUBON - SHEYNE 230KV CKT 1	278.7	0.03941	107.6723	FORBES - ROSEAU 500KV CKT 1	
17G	16ALL	2	TO->FROM	G16_035	AUDUBON - SHEYNE 230KV CKT 1	278.1	0.05312	106.8678	ALEXMRES3 345.00 - BISON 3 345.00 345KV CKT 1	
17G	16ALL	2	TO->FROM	G16_035	AUDUBON - SHEYNE 230KV CKT 1	278.1	0.04111	104.4889	RIEL - ROSEAU 500KV CKT 1	
17G	16ALL	2	TO->FROM	G16_035	AUDUBON - SHEYNE 230KV CKT 1	278.1	0.04111	104.0574	ROSEAU - ROSEAUM 2 500.00 500KV CKT 1	
17G	16ALL	2	TO->FROM	G16_035	AUDUBON - SHEYNE 230KV CKT 1	278.1	0.04111	104.0574	ROSEAU - ROSEAUM 2 500.00 500KV CKT 1	
17G	16ALL	2	TO->FROM	G16_035	AUDUBON - SHEYNE 230KV CKT 1	278.1	0.04111	103.59	FORBES - ROSEAU 500KV CKT 1	
17SP	16ALL	2	TO->FROM	G16_035	AUDUBON - SHEYNE 230KV CKT 1	278.7	0.04305	101.8065	FERGSFL4 230.00 - WAHPETON 230KV CKT 1	

SEASON	GROUP	SCENARIO	DIRECTION	SOURCE	MONITORED ELEMENT	RATE		CONTINGENCY		CONTINGENCY
						(MVA)	TDF	LOADING %		
25SP	16ALL	2	TO->FROM	G16_035	BISON 3 345.00 - BUFFALO 345KV CKT 1	779.9	0.09026	105.9621	RIEL - ROSEAU 500KV CKT 1	
25SP	16ALL	2	TO->FROM	G16_035	BISON 3 345.00 - BUFFALO 345KV CKT 1	779.9	0.09026	105.5902	ROSEAU - ROSEAUM 2 500.00 500KV CKT 1	
25SP	16ALL	2	TO->FROM	G16_035	BISON 3 345.00 - BUFFALO 345KV CKT 1	779.9	0.09026	105.5902	ROSEAU - ROSEAUM 2 500.00 500KV CKT 1	
25SP	16ALL	2	TO->FROM	G16_035	BISON 3 345.00 - BUFFALO 345KV CKT 1	779.9	0.09026	105.2184	FORBES - ROSEAU 500KV CKT 1	
25SP	16ALL	2	TO->FROM	G16_035	BISON 3 345.00 - BUFFALO 345KV CKT 1	779.9	0.09384	103.1209	CENTER - CNTSHNT3 345.00 345KV CKT Z1	
25SP	16ALL	2	TO->FROM	G16_035	BISON 3 345.00 - BUFFALO 345KV CKT 1	779.9	0.09384	103.1209	CNTSHNT3 345.00 - PRAIRIE3 345.00 345KV CKT 1	
17SP	16ALL	2	TO->FROM	G16_035	BISON 3 345.00 - BUFFALO 345KV CKT 1	784.3	0.09304	102.8268	RIEL - ROSEAU 500KV CKT 1	
20SP	16ALL	2	TO->FROM	G16_035	BISON 3 345.00 - BUFFALO 345KV CKT 1	783.5	0.09018	102.7313	RIEL - ROSEAU 500KV CKT 1	
17SP	16ALL	2	TO->FROM	G16_035	BISON 3 345.00 - BUFFALO 345KV CKT 1	784.3	0.09304	102.3933	ROSEAU - ROSEAUM 2 500.00 500KV CKT 1	
17SP	16ALL	2	TO->FROM	G16_035	BISON 3 345.00 - BUFFALO 345KV CKT 1	784.3	0.09304	102.3933	ROSEAU - ROSEAUM 2 500.00 500KV CKT 1	
20SP	16ALL	2	TO->FROM	G16_035	BISON 3 345.00 - BUFFALO 345KV CKT 1	783.5	0.09018	102.3229	ROSEAU - ROSEAUM 2 500.00 500KV CKT 1	
20SP	16ALL	2	TO->FROM	G16_035	BISON 3 345.00 - BUFFALO 345KV CKT 1	783.5	0.09018	102.3229	ROSEAU - ROSEAUM 2 500.00 500KV CKT 1	
17SP	16ALL	2	TO->FROM	G16_035	BISON 3 345.00 - BUFFALO 345KV CKT 1	784.3	0.09304	101.9598	FORBES - ROSEAU 500KV CKT 1	
20SP	16ALL	2	TO->FROM	G16_035	BISON 3 345.00 - BUFFALO 345KV CKT 1	783.5	0.09018	101.9017	FORBES - ROSEAU 500KV CKT 1	
25SP	16ALL	2	TO->FROM	G16_035	BUFFALO - JAMESTOWN 345KV CKT 1	705	0.09178	129.9336	RIEL - ROSEAU 500KV CKT 1	
25SP	16ALL	2	TO->FROM	G16_035	BUFFALO - JAMESTOWN 345KV CKT 1	705	0.09178	129.5222	ROSEAU - ROSEAUM 2 500.00 500KV CKT 1	
25SP	16ALL	2	TO->FROM	G16_035	BUFFALO - JAMESTOWN 345KV CKT 1	705	0.09178	129.5222	ROSEAU - ROSEAUM 2 500.00 500KV CKT 1	
25SP	16ALL	2	TO->FROM	G16_035	BUFFALO - JAMESTOWN 345KV CKT 1	705	0.09178	129.1109	FORBES - ROSEAU 500KV CKT 1	
25SP	16ALL	2	TO->FROM	G16_035	BUFFALO - JAMESTOWN 345KV CKT 1	705	0.0962	127.9458	CENTER - CNTSHNT3 345.00 345KV CKT Z1	
25SP	16ALL	2	TO->FROM	G16_035	BUFFALO - JAMESTOWN 345KV CKT 1	705	0.0962	127.9458	CNTSHNT3 345.00 - PRAIRIE3 345.00 345KV CKT 1	
20SP	16ALL	2	TO->FROM	G16_035	BUFFALO - JAMESTOWN 345KV CKT 1	704.9	0.09171	126.0368	RIEL - ROSEAU 500KV CKT 1	
17SP	16ALL	2	TO->FROM	G16_035	BUFFALO - JAMESTOWN 345KV CKT 1	704.9	0.09454	125.8457	RIEL - ROSEAU 500KV CKT 1	
20SP	16ALL	2	TO->FROM	G16_035	BUFFALO - JAMESTOWN 345KV CKT 1	704.9	0.09171	125.5686	ROSEAU - ROSEAUM 2 500.00 500KV CKT 1	
20SP	16ALL	2	TO->FROM	G16_035	BUFFALO - JAMESTOWN 345KV CKT 1	704.9	0.09171	125.5686	ROSEAU - ROSEAUM 2 500.00 500KV CKT 1	
17SP	16ALL	2	TO->FROM	G16_035	BUFFALO - JAMESTOWN 345KV CKT 1	704.9	0.09454	125.3775	ROSEAU - ROSEAUM 2 500.00 500KV CKT 1	
17SP	16ALL	2	TO->FROM	G16_035	BUFFALO - JAMESTOWN 345KV CKT 1	704.9	0.09454	125.3775	ROSEAU - ROSEAUM 2 500.00 500KV CKT 1	
20SP	16ALL	2	TO->FROM	G16_035	BUFFALO - JAMESTOWN 345KV CKT 1	704.9	0.09171	125.1147	FORBES - ROSEAU 500KV CKT 1	
17SP	16ALL	2	TO->FROM	G16_035	BUFFALO - JAMESTOWN 345KV CKT 1	704.9	0.09454	124.8952	FORBES - ROSEAU 500KV CKT 1	
20SP	16ALL	2	TO->FROM	G16_035	BUFFALO - JAMESTOWN 345KV CKT 1	704.9	0.09585	121.7626	CENTER - CNTSHNT3 345.00 345KV CKT Z1	
20SP	16ALL	2	TO->FROM	G16_035	BUFFALO - JAMESTOWN 345KV CKT 1	704.9	0.09585	121.7626	CNTSHNT3 345.00 - PRAIRIE3 345.00 345KV CKT 1	
17SP	16ALL	2	TO->FROM	G16_035	BUFFALO - JAMESTOWN 345KV CKT 1	704.9	0.09858	120.8482	CENTER - CNTSHNT3 345.00 345KV CKT Z1	
17SP	16ALL	2	TO->FROM	G16_035	BUFFALO - JAMESTOWN 345KV CKT 1	704.9	0.09858	120.8482	CNTSHNT3 345.00 - PRAIRIE3 345.00 345KV CKT 1	
25SP	16ALL	2	TO->FROM	G16_035	BUFFALO - JAMESTOWN 345KV CKT 1	705	0.09769	117.869	FARGO - SHEYNE 230KV CKT 1	
25SP	16ALL	2	TO->FROM	G16_035	BUFFALO - JAMESTOWN 345KV CKT 1	705	0.09153	117.4659	P12:345:UMZB:# 102 #: AVS BD IN ND. AVS BRD LR	
25SP	16ALL	2	TO->FROM	G16_035	BUFFALO - JAMESTOWN 345KV CKT 1	705	0.09153	117.4659	P12:345:UMZB:# 103 #: BD IN SD. LOSS OF LINE	
25SP	16ALL	2	TO->FROM	G16_035	BUFFALO - JAMESTOWN 345KV CKT 1	705	0.09153	117.4375	ANTELOP-LNX3345.00 - ANTELOPE VALLEY 345KV CKT Z	
25SP	16ALL	2	TO->FROM	G16_035	BUFFALO - JAMESTOWN 345KV CKT 1	705	0.09153	117.324	BRDLAND-LNX3345.00 - HURON 345KV CKT Z	
25SP	16ALL	2	TO->FROM	G16_035	BUFFALO - JAMESTOWN 345KV CKT 1	705	0.09153	117.324	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	
25SP	16ALL	2	TO->FROM	G16_035	BUFFALO - JAMESTOWN 345KV CKT 1	705	0.09153	117.324	P13:345:UMZB:# 244 #: BD IN SD. LOSS OF TX	
25SP	16ALL	2	TO->FROM	G16_035	BUFFALO - JAMESTOWN 345KV CKT 1	705	0.09042	117.2674	GLENBORO SOUTH - J290_SUB 230.00 230KV CKT 1	
16WP	16ALL	2	TO->FROM	G16_035	BUFFALO - JAMESTOWN 345KV CKT 1	716.9	0.0966	117.0413	CENTER - CNTSHNT3 345.00 345KV CKT Z1	
16WP	16ALL	2	TO->FROM	G16_035	BUFFALO - JAMESTOWN 345KV CKT 1	716.9	0.0966	117.0413	CNTSHNT3 345.00 - PRAIRIE3 345.00 345KV CKT 1	
17G	16ALL	2	TO->FROM	G16_035	BUFFALO - JAMESTOWN 345KV CKT 1	705	0.09332	116.7084	RIEL - ROSEAU 500KV CKT 1	
17G	16ALL	2	TO->FROM	G16_035	BUFFALO - JAMESTOWN 345KV CKT 1	705	0.09332	116.3963	ROSEAU - ROSEAUM 2 500.00 500KV CKT 1	
17G	16ALL	2	TO->FROM	G16_035	BUFFALO - JAMESTOWN 345KV CKT 1	705	0.09332	116.3963	ROSEAU - ROSEAUM 2 500.00 500KV CKT 1	
25SP	16ALL	2	TO->FROM	G16_035	BUFFALO - JAMESTOWN 345KV CKT 1	705	0.08453	116.2857	FTTHOMZ-LNX3345.00 - GRPRAR2-LNX3345.00 345KV CKT 1	
17G	16ALL	2	TO->FROM	G16_035	BUFFALO - JAMESTOWN 345KV CKT 1	705	0.09332	116.0843	FORBES - ROSEAU 500KV CKT 1	
20WP	16ALL	2	TO->FROM	G16_035	BUFFALO - JAMESTOWN 345KV CKT 1	716.8	0.09366	116.0637	CENTER - CNTSHNT3 345.00 345KV CKT Z1	
20WP	16ALL	2	TO->FROM	G16_035	BUFFALO - JAMESTOWN 345KV CKT 1	716.8	0.09366	116.0637	CNTSHNT3 345.00 - PRAIRIE3 345.00 345KV CKT 1	
25SP	16ALL	2	TO->FROM	G16_035	BUFFALO - JAMESTOWN 345KV CKT 1	705	0.08366	115.966	HANKINSON - WAHPETON 230KV CKT 1	
25SP	16ALL	2	TO->FROM	G16_035	BUFFALO - JAMESTOWN 345KV CKT 1	705	0.05738	115.8991	MANDAN 4 230.00 - MPC02100TAP4230.00 230KV CKT 1	
20SP	16ALL	2	TO->FROM	G16_035	BUFFALO - JAMESTOWN 345KV CKT 1	704.9	0.09347	115.857	G16-044-TAP 345.00 - GROTON-LNX3 345.00 345KV CKT 1	
20SP	16ALL	2	TO->FROM	G16_035	BUFFALO - JAMESTOWN 345KV CKT 1	704.9	0.09347	115.857	GROTON - GROTON-LNX3 345.00 345KV CKT Z	
17G	16ALL	2	TO->FROM	G16_035	BUFFALO - JAMESTOWN 345KV CKT 1	705	0.09732	115.3223	CENTER - CNTSHNT3 345.00 345KV CKT Z1	
17G	16ALL	2	TO->FROM	G16_035	BUFFALO - JAMESTOWN 345KV CKT 1	705	0.09732	115.3223	CNTSHNT3 345.00 - PRAIRIE3 345.00 345KV CKT 1	

SEASON	GROUP	SCENARIO	DIRECTION	SOURCE	MONITORED ELEMENT	RATE		CONTINGENCY		CONTINGENCY
						(MVA)	TDF	LOADING %		
17SP	16ALL	2	TO->FROM	G16_035	BUFFALO - JAMESTOWN 345KV CKT 1	704.9	0.09621	115.2862	G16-044-TAP 345.00 - GROTON-LNX3 345.00 345KV CKT 1	
17SP	16ALL	2	TO->FROM	G16_035	BUFFALO - JAMESTOWN 345KV CKT 1	704.9	0.09621	115.2862	GROTON - GROTON-LNX3 345.00 345KV CKT Z	
17SP	16ALL	2	TO->FROM	G16_035	BUFFALO - JAMESTOWN 345KV CKT 1	704.9	0.09375	115.2409	FORMAN - OAKES 230KV CKT 1	
25SP	16ALL	2	TO->FROM	G16_035	BUFFALO - JAMESTOWN 345KV CKT 1	705	0.09375	115.1844	LELAND OLDS - LELAND1-LNX3345.00 345KV CKT Z	
25SP	16ALL	2	TO->FROM	G16_035	BUFFALO - JAMESTOWN 345KV CKT 1	705	0.09375	115.0851	G16-044-TAP 345.00 - LELAND1-LNX3345.00 345KV CKT 1	
25SP	16ALL	2	TO->FROM	G16_035	BUFFALO - JAMESTOWN 345KV CKT 1	705	0.09375	114.6643	P12:345:UMZB:# 109 #: LOS GRT IN ND. LOS GRT	
17SP	16ALL	2	TO->FROM	G16_035	BUFFALO - JAMESTOWN 345KV CKT 1	704.9	0.09237	113.7573	ELLENDALE - OAKES 230KV CKT 1	
20SP	16ALL	2	TO->FROM	G16_035	BUFFALO - JAMESTOWN 345KV CKT 1	704.9	0.09752	112.908	FARGO - SHEYNNNE 230KV CKT 1	
16WP	16ALL	2	TO->FROM	G16_035	BUFFALO - JAMESTOWN 345KV CKT 1	716.9	0.09263	112.8146	RIEL - ROSEAU 500KV CKT 1	
16WP	16ALL	2	TO->FROM	G16_035	BUFFALO - JAMESTOWN 345KV CKT 1	716.9	0.09263	112.6332	ROSEAU - ROSEAU 2 500.00 500KV CKT 1	
16WP	16ALL	2	TO->FROM	G16_035	BUFFALO - JAMESTOWN 345KV CKT 1	716.9	0.09263	112.6332	ROSEAU - ROSEAU 2 500.00 500KV CKT 1	
16WP	16ALL	2	TO->FROM	G16_035	BUFFALO - JAMESTOWN 345KV CKT 1	716.9	0.09263	112.4658	FORBES - ROSEAU 500KV CKT 1	
20SP	16ALL	2	TO->FROM	G16_035	BUFFALO - JAMESTOWN 345KV CKT 1	704.9	0.09126	112.354	P12:345:UMZB:# 102 #: AVS BD IN ND. AVS BRD LR	
20SP	16ALL	2	TO->FROM	G16_035	BUFFALO - JAMESTOWN 345KV CKT 1	704.9	0.09126	112.354	P12:345:UMZB:# 103 #: BD IN SD. LOSS OF LINE	
20SP	16ALL	2	TO->FROM	G16_035	BUFFALO - JAMESTOWN 345KV CKT 1	704.9	0.09126	112.3257	ANTELOP-LNX3345.00 - ANTELOPE VALLEY 345KV CKT Z	
20SP	16ALL	2	TO->FROM	G16_035	BUFFALO - JAMESTOWN 345KV CKT 1	704.9	0.09126	112.2264	ANTELOP-LNX3345.00 - BRDLAND-LNX3345.00 345KV CKT 1	
20SP	16ALL	2	TO->FROM	G16_035	BUFFALO - JAMESTOWN 345KV CKT 1	704.9	0.09126	112.2264	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	
20SP	16ALL	2	TO->FROM	G16_035	BUFFALO - JAMESTOWN 345KV CKT 1	704.9	0.09126	112.2264	P13:345:UMZB:# 244 #: BD IN SD. LOSS OF TX	
17SP	16ALL	2	TO->FROM	G16_035	BUFFALO - JAMESTOWN 345KV CKT 1	704.9	0.09315	112.1271	FORMAN - HANKINSON 230KV CKT 1	
25SP	16ALL	2	TO->FROM	G16_035	BUFFALO - JAMESTOWN 345KV CKT 1	705	0.08453	111.7893	System Intact	
20WP	16ALL	2	TO->FROM	G16_035	BUFFALO - JAMESTOWN 345KV CKT 1	716.8	0.08935	111.6975	RIEL - ROSEAU 500KV CKT 1	
17SP	16ALL	2	TO->FROM	G16_035	BUFFALO - JAMESTOWN 345KV CKT 1	704.9	0.09382	111.6281	P12:345:UMZB:# 102 #: AVS BD IN ND. AVS BRD LR	
17SP	16ALL	2	TO->FROM	G16_035	BUFFALO - JAMESTOWN 345KV CKT 1	704.9	0.09382	111.6281	P12:345:UMZB:# 103 #: BD IN SD. LOSS OF LINE	
17SP	16ALL	2	TO->FROM	G16_035	BUFFALO - JAMESTOWN 345KV CKT 1	704.9	0.09382	111.5997	ANTELOP-LNX3345.00 - ANTELOPE VALLEY 345KV CKT Z	
20WP	16ALL	2	TO->FROM	G16_035	BUFFALO - JAMESTOWN 345KV CKT 1	716.8	0.08935	111.5302	ROSEAU - ROSEAU 2 500.00 500KV CKT 1	
20WP	16ALL	2	TO->FROM	G16_035	BUFFALO - JAMESTOWN 345KV CKT 1	716.8	0.08935	111.5302	ROSEAU - ROSEAU 2 500.00 500KV CKT 1	
17SP	16ALL	2	TO->FROM	G16_035	BUFFALO - JAMESTOWN 345KV CKT 1	704.9	0.09382	111.472	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	
17SP	16ALL	2	TO->FROM	G16_035	BUFFALO - JAMESTOWN 345KV CKT 1	704.9	0.09382	111.472	P13:345:UMZB:# 244 #: BD IN SD. LOSS OF TX	
17SP	16ALL	2	TO->FROM	G16_035	BUFFALO - JAMESTOWN 345KV CKT 1	704.9	0.08751	111.3816	HANKINSON - WAHPETON 230KV CKT 1	
20WP	16ALL	2	TO->FROM	G16_035	BUFFALO - JAMESTOWN 345KV CKT 1	716.8	0.08935	111.3488	FORBES - ROSEAU 500KV CKT 1	
20SP	16ALL	2	TO->FROM	G16_035	BUFFALO - JAMESTOWN 345KV CKT 1	704.9	0.08428	111.3323	FARGO - SHEYNNNE 230KV CKT 1	
20SP	16ALL	2	TO->FROM	G16_035	BUFFALO - JAMESTOWN 345KV CKT 1	704.9	0.09347	110.0233	LELAND OLDS - LELAND1-LNX3345.00 345KV CKT Z	
20SP	16ALL	2	TO->FROM	G16_035	BUFFALO - JAMESTOWN 345KV CKT 1	704.9	0.09347	109.924	G16-044-TAP 345.00 - LELAND1-LNX3345.00 345KV CKT 1	
17G	16ALL	2	TO->FROM	G16_035	BUFFALO - JAMESTOWN 345KV CKT 1	705	0.09261	109.9025	FORMAN - OAKES 230KV CKT 1	
16WP	16ALL	2	TO->FROM	G16_035	BUFFALO - JAMESTOWN 345KV CKT 1	716.9	0.09188	109.8689	FORMAN - OAKES 230KV CKT 1	
17G	16ALL	2	TO->FROM	G16_035	BUFFALO - JAMESTOWN 345KV CKT 1	705	0.09482	109.8013	G16-044-TAP 345.00 - GROTON-LNX3 345.00 345KV CKT 1	
17G	16ALL	2	TO->FROM	G16_035	BUFFALO - JAMESTOWN 345KV CKT 1	705	0.09482	109.8013	GROTON - GROTON-LNX3 345.00 345KV CKT Z	
20SP	16ALL	2	TO->FROM	G16_035	BUFFALO - JAMESTOWN 345KV CKT 1	704.9	0.05716	109.6443	MANDAN 4 230.00 - MPC02100TAP4230.00 230KV CKT 1	
16WP	16ALL	2	TO->FROM	G16_035	BUFFALO - JAMESTOWN 345KV CKT 1	716.9	0.09427	109.6258	G16-044-TAP 345.00 - GROTON-LNX3 345.00 345KV CKT 1	
16WP	16ALL	2	TO->FROM	G16_035	BUFFALO - JAMESTOWN 345KV CKT 1	716.9	0.09427	109.6258	GROTON - GROTON-LNX3 345.00 345KV CKT Z	
20SP	16ALL	2	TO->FROM	G16_035	BUFFALO - JAMESTOWN 345KV CKT 1	704.9	0.09347	109.4877	P12:345:UMZB:# 109 #: LOS GRT IN ND. LOS GRT	
17SP	16ALL	2	TO->FROM	G16_035	BUFFALO - JAMESTOWN 345KV CKT 1	704.9	0.09621	109.3948	LELAND OLDS - LELAND1-LNX3345.00 345KV CKT Z	
17SP	16ALL	2	TO->FROM	G16_035	BUFFALO - JAMESTOWN 345KV CKT 1	704.9	0.09621	109.2671	G16-044-TAP 345.00 - LELAND1-LNX3345.00 345KV CKT 1	
17SP	16ALL	2	TO->FROM	G16_035	BUFFALO - JAMESTOWN 345KV CKT 1	704.9	0.09621	108.8518	P12:345:UMZB:# 109 #: LOS GRT IN ND. LOS GRT	
16WP	16ALL	2	TO->FROM	G16_035	BUFFALO - JAMESTOWN 345KV CKT 1	716.9	0.09053	108.4558	ELLENDALE - OAKES 230KV CKT 1	
17G	16ALL	2	TO->FROM	G16_035	BUFFALO - JAMESTOWN 345KV CKT 1	705	0.09124	108.4475	ELLENDALE - OAKES 230KV CKT 1	
20WP	16ALL	2	TO->FROM	G16_035	BUFFALO - JAMESTOWN 345KV CKT 1	716.8	0.09125	107.7539	G16-044-TAP 345.00 - GROTON-LNX3 345.00 345KV CKT 1	
20WP	16ALL	2	TO->FROM	G16_035	BUFFALO - JAMESTOWN 345KV CKT 1	716.8	0.09125	107.7539	GROTON - GROTON-LNX3 345.00 345KV CKT Z	
17G	16ALL	2	TO->FROM	G16_035	BUFFALO - JAMESTOWN 345KV CKT 1	705	0.09202	106.802	FORMAN - HANKINSON 230KV CKT 1	
20SP	16ALL	2	TO->FROM	G16_035	BUFFALO - JAMESTOWN 345KV CKT 1	704.9	0.08428	106.7643	System Intact	
16WP	16ALL	2	TO->FROM	G16_035	BUFFALO - JAMESTOWN 345KV CKT 1	716.9	0.09128	106.598	FORMAN - HANKINSON 230KV CKT 1	
17G	16ALL	2	TO->FROM	G16_035	BUFFALO - JAMESTOWN 345KV CKT 1	705	0.09185	106.334	G09_0011ST 345.00 - WATERTOWN 345KV CKT 1	
16WP	16ALL	2	TO->FROM	G16_035	BUFFALO - JAMESTOWN 345KV CKT 1	716.9	0.09079	106.2928	GLENBORO SOUTH - J290_SUB 230.00 230KV CKT 1	
17G	16ALL	2	TO->FROM	G16_035	BUFFALO - JAMESTOWN 345KV CKT 1	705	0.09763	106.1335	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT	
16WP	16ALL	2	TO->FROM	G16_035	BUFFALO - JAMESTOWN 345KV CKT 1	716.9	0.09119	106.0767	G09_0011ST 345.00 - WATERTOWN 345KV CKT 1	

SEASON	GROUP	SCENARIO	DIRECTION	SOURCE	MONITORED ELEMENT	RATE		CONTINGENCY		CONTINGENCY
						(MVA)	TDF	LOADING %		
17G	16ALL	2	TO->FROM	G16_035	BUFFALO - JAMESTOWN 345KV CKT 1	705	0.09247	105.9644	P12:345:UMZB:# 102 #: AVS BD IN ND. AVS BRD LR	
17G	16ALL	2	TO->FROM	G16_035	BUFFALO - JAMESTOWN 345KV CKT 1	705	0.09247	105.9644	P12:345:UMZB:# 103 #: BD IN SD. LOSS OF LINE	
17G	16ALL	2	TO->FROM	G16_035	BUFFALO - JAMESTOWN 345KV CKT 1	705	0.09247	105.936	ANTELOP-LNX3345.00 - ANTELOPE VALLEY 345KV CKT Z	
17G	16ALL	2	TO->FROM	G16_035	BUFFALO - JAMESTOWN 345KV CKT 1	705	0.09247	105.8367	BRDLAND-LNX3345.00 - HURON 345KV CKT Z	
17G	16ALL	2	TO->FROM	G16_035	BUFFALO - JAMESTOWN 345KV CKT 1	705	0.09247	105.8367	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	
17G	16ALL	2	TO->FROM	G16_035	BUFFALO - JAMESTOWN 345KV CKT 1	705	0.09247	105.8367	P13:345:UMZB:# 244 #: BD IN SD. LOSS OF TX	
16WP	16ALL	2	TO->FROM	G16_035	BUFFALO - JAMESTOWN 345KV CKT 1	716.9	0.09196	105.7041	P12:345:UMZB:# 102 #: AVS BD IN ND. AVS BRD LR	
16WP	16ALL	2	TO->FROM	G16_035	BUFFALO - JAMESTOWN 345KV CKT 1	716.9	0.09196	105.7041	P12:345:UMZB:# 103 #: BD IN SD. LOSS OF LINE	
16WP	16ALL	2	TO->FROM	G16_035	BUFFALO - JAMESTOWN 345KV CKT 1	716.9	0.09196	105.6762	ANTELOP-LNX3345.00 - ANTELOPE VALLEY 345KV CKT Z	
20WP	16ALL	2	TO->FROM	G16_035	BUFFALO - JAMESTOWN 345KV CKT 1	716.8	0.088	105.6471	GLENBORO SOUTH - J290_SUB 230.00 230KV CKT 1	
17SP	16ALL	2	TO->FROM	G16_035	BUFFALO - JAMESTOWN 345KV CKT 1	704.9	0.08651	105.616	System Intact	
16WP	16ALL	2	TO->FROM	G16_035	BUFFALO - JAMESTOWN 345KV CKT 1	716.9	0.08573	105.61	HANKINSON - WAHPETON 230KV CKT 1	
16WP	16ALL	2	TO->FROM	G16_035	BUFFALO - JAMESTOWN 345KV CKT 1	716.9	0.08476	105.5533	MAPLE RIVER - PILSBRY4 230.00 230KV CKT 1	
20WP	16ALL	2	TO->FROM	G16_035	BUFFALO - JAMESTOWN 345KV CKT 1	716.8	0.0823	104.7459	MAPLE RIVER - PILSBRY4 230.00 230KV CKT 1	
20WP	16ALL	2	TO->FROM	G16_035	BUFFALO - JAMESTOWN 345KV CKT 1	716.8	0.08744	104.6948	G09_0011ST 345.00 - WATERTOWN 345KV CKT 1	
20WP	16ALL	2	TO->FROM	G16_035	BUFFALO - JAMESTOWN 345KV CKT 1	716.8	0.0891	104.4726	P12:345:UMZB:# 102 #: AVS BD IN ND. AVS BRD LR	
20WP	16ALL	2	TO->FROM	G16_035	BUFFALO - JAMESTOWN 345KV CKT 1	716.8	0.0891	104.4726	P12:345:UMZB:# 103 #: BD IN SD. LOSS OF LINE	
20WP	16ALL	2	TO->FROM	G16_035	BUFFALO - JAMESTOWN 345KV CKT 1	716.8	0.0891	104.4586	ANTELOP-LNX3345.00 - ANTELOPE VALLEY 345KV CKT Z	
20WP	16ALL	2	TO->FROM	G16_035	BUFFALO - JAMESTOWN 345KV CKT 1	716.8	0.0891	104.3889	ANTELOP-LNX3345.00 - BRDLAND-LNX3345.00 345KV CKT 1	
20WP	16ALL	2	TO->FROM	G16_035	BUFFALO - JAMESTOWN 345KV CKT 1	716.8	0.0891	104.3889	BRDLAND-LNX3345.00 - HURON 345KV CKT Z	
20WP	16ALL	2	TO->FROM	G16_035	BUFFALO - JAMESTOWN 345KV CKT 1	716.8	0.0891	104.3889	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	
20WP	16ALL	2	TO->FROM	G16_035	BUFFALO - JAMESTOWN 345KV CKT 1	716.8	0.0891	104.3889	P13:345:UMZB:# 244 #: BD IN SD. LOSS OF TX	
20WP	16ALL	2	TO->FROM	G16_035	BUFFALO - JAMESTOWN 345KV CKT 1	716.8	0.08141	104.0523	HANKINSON - WAHPETON 230KV CKT 1	
17G	16ALL	2	TO->FROM	G16_035	BUFFALO - JAMESTOWN 345KV CKT 1	705	0.09482	103.9095	LELAND OLDS - LELAND1-LNX3345.00 345KV CKT Z	
20WP	16ALL	2	TO->FROM	G16_035	BUFFALO - JAMESTOWN 345KV CKT 1	716.8	0.05536	103.8884	MANDAN 4 230.00 - MPC02100TAP4230.00 230KV CKT 1	
16WP	16ALL	2	TO->FROM	G16_035	BUFFALO - JAMESTOWN 345KV CKT 1	716.9	0.09427	103.7874	LELAND OLDS - LELAND1-LNX3345.00 345KV CKT Z	
16WP	16ALL	2	TO->FROM	G16_035	BUFFALO - JAMESTOWN 345KV CKT 1	716.9	0.09427	103.6897	G16-044-TAP 345.00 - LELAND1-LNX3345.00 345KV CKT 1	
16WP	16ALL	2	TO->FROM	G16_035	BUFFALO - JAMESTOWN 345KV CKT 1	716.9	0.08476	100.5317	System Intact	
17G	16ALL	2	TO->FROM	G16_035	BUFFALO - JAMESTOWN 345KV CKT 1	705	0.08538	100.3369	System Intact	
17G	16ALL	2	TO->FROM	G16_035	COLBYS 161.00 - NEW IOWA WIND 161KV CKT 1	197.8	0.03823	106.0807	HAZLETON - MITCHLCO3 345.00 345KV CKT 1	
17G	16ALL	2	TO->FROM	G16_035	ELLENDALE - J316_SUB 230.00 230KV CKT 1	342.8	0.05328	144.6896	ELLENDALE - MERRCRT4 230.00 230KV CKT 1	
17SP	16ALL	2	TO->FROM	G16_035	ELLENDALE - J316_SUB 230.00 230KV CKT 1	342.8	0.05424	144.2693	ELLENDALE - MERRCRT4 230.00 230KV CKT 1	
16WP	16ALL	2	TO->FROM	G16_035	ELLENDALE - J316_SUB 230.00 230KV CKT 1	350.8	0.0535	140.7049	ELLENDALE - MERRCRT4 230.00 230KV CKT 1	
17SP	16ALL	2	TO->FROM	G16_035	ELLENDALE - J316_SUB 230.00 230KV CKT 1	342.8	0.03454	106.1424	BUFFALO - JAMESTOWN 345KV CKT 1	
17G	16ALL	2	TO->FROM	G16_035	ELLENDALE - J316_SUB 230.00 230KV CKT 1	342.8	0.03395	105.9274	BUFFALO - JAMESTOWN 345KV CKT 1	
17G	16ALL	2	TO->FROM	G16_035	ELLENDALE - J316_SUB 230.00 230KV CKT 1	342.8	0.03451	105.7051	G16-044-TAP 345.00 - GROTON-LNX3 345.00 345KV CKT 1	
17G	16ALL	2	TO->FROM	G16_035	ELLENDALE - J316_SUB 230.00 230KV CKT 1	342.8	0.03451	105.7051	GROTON - GROTON-LNX3 345.00 345KV CKT Z	
17SP	16ALL	2	TO->FROM	G16_035	ELLENDALE - J316_SUB 230.00 230KV CKT 1	342.8	0.03518	105.6175	G16-044-TAP 345.00 - GROTON-LNX3 345.00 345KV CKT 1	
17SP	16ALL	2	TO->FROM	G16_035	ELLENDALE - J316_SUB 230.00 230KV CKT 1	342.8	0.03518	105.6175	GROTON - GROTON-LNX3 345.00 345KV CKT Z	
17SP	16ALL	2	TO->FROM	G16_035	ELLENDALE - J316_SUB 230.00 230KV CKT 1	342.8	0.03502	104.4674	CENTER - JAMESTOWN 345KV CKT 1	
17SP	16ALL	2	TO->FROM	G16_035	ELLENDALE - J316_SUB 230.00 230KV CKT 1	342.8	0.03214	104.22	RIEL - ROSEAU 500KV CKT 1	
17G	16ALL	2	TO->FROM	G16_035	ELLENDALE - J316_SUB 230.00 230KV CKT 1	342.8	0.03442	104.1648	CENTER - JAMESTOWN 345KV CKT 1	
17SP	16ALL	2	TO->FROM	G16_035	ELLENDALE - J316_SUB 230.00 230KV CKT 1	342.8	0.03214	104.0158	ROSEAU - ROSEAUM 2 500.00 500KV CKT 1	
17SP	16ALL	2	TO->FROM	G16_035	ELLENDALE - J316_SUB 230.00 230KV CKT 1	342.8	0.03214	104.0158	ROSEAU - ROSEAUM 2 500.00 500KV CKT 1	
17SP	16ALL	2	TO->FROM	G16_035	ELLENDALE - J316_SUB 230.00 230KV CKT 1	342.8	0.03214	103.8408	FORBES - ROSEAU 500KV CKT 1	
17G	16ALL	2	TO->FROM	G16_035	ELLENDALE - J316_SUB 230.00 230KV CKT 1	318.8	0.03006	103.7819	System Intact	
17SP	16ALL	2	TO->FROM	G16_035	ELLENDALE - J316_SUB 230.00 230KV CKT 1	318.7	0.0306	103.5268	System Intact	
16WP	16ALL	2	TO->FROM	G16_035	ELLENDALE - J316_SUB 230.00 230KV CKT 1	318.8	0.03018	103.3451	System Intact	
16WP	16ALL	2	TO->FROM	G16_035	ELLENDALE - J316_SUB 230.00 230KV CKT 1	350.8	0.03405	103.2807	BUFFALO - JAMESTOWN 345KV CKT 1	
17G	16ALL	2	TO->FROM	G16_035	ELLENDALE - J316_SUB 230.00 230KV CKT 1	342.8	0.03158	102.9652	RIEL - ROSEAU 500KV CKT 1	
17G	16ALL	2	TO->FROM	G16_035	ELLENDALE - J316_SUB 230.00 230KV CKT 1	342.8	0.03158	102.8486	ROSEAU - ROSEAUM 2 500.00 500KV CKT 1	
17G	16ALL	2	TO->FROM	G16_035	ELLENDALE - J316_SUB 230.00 230KV CKT 1	342.8	0.03158	102.8486	ROSEAU - ROSEAUM 2 500.00 500KV CKT 1	
17G	16ALL	2	TO->FROM	G16_035	ELLENDALE - J316_SUB 230.00 230KV CKT 1	342.8	0.03158	102.7027	FORBES - ROSEAU 500KV CKT 1	
16WP	16ALL	2	TO->FROM	G16_035	ELLENDALE - J316_SUB 230.00 230KV CKT 1	350.8	0.03467	102.6771	G16-044-TAP 345.00 - GROTON-LNX3 345.00 345KV CKT 1	
16WP	16ALL	2	TO->FROM	G16_035	ELLENDALE - J316_SUB 230.00 230KV CKT 1	350.8	0.03467	102.6771	GROTON - GROTON-LNX3 345.00 345KV CKT Z	

SEASON	GROUP	SCENARIO	DIRECTION	SOURCE	MONITORED ELEMENT	RATE		CONTINGENCY		CONTINGENCY
						(MVA)	TDF	LOADING %		
17SP	16ALL		2 TO->FROM	G16_035	ELLENDALE - J316_SUB 230.00 230KV CKT 1	342.8	0.03334	102.487	BISON 3 345.00 - BUFFALO 345KV CKT 1	
17G	16ALL		2 TO->FROM	G16_035	ELLENDALE - J316_SUB 230.00 230KV CKT 1	342.8	0.03276	102.4257	BISON 3 345.00 - BUFFALO 345KV CKT 1	
17G	16ALL		2 TO->FROM	G16_035	ELLENDALE - J316_SUB 230.00 230KV CKT 1	342.8	0.03451	102.0861	P12:345:UMZB:# 109 #: LOS GRT IN ND. LOS GRT	
17SP	16ALL		2 TO->FROM	G16_035	ELLENDALE - J316_SUB 230.00 230KV CKT 1	342.8	0.03518	102.0303	P12:345:UMZB:# 109 #: LOS GRT IN ND. LOS GRT	
17SP	16ALL		2 TO->FROM	G16_035	ELLENDALE - J316_SUB 230.00 230KV CKT 1	342.8	0.0306	101.1202	ROSEAU - ROSEAU 2 500.00 500KV CKT 1	
16WP	16ALL		2 TO->FROM	G16_035	ELLENDALE - J316_SUB 230.00 230KV CKT 1	350.8	0.03451	101.0427	CENTER - JAMESTOWN 345KV CKT 1	
17SP	16ALL		2 TO->FROM	G16_035	ELLENDALE - J316_SUB 230.00 230KV CKT 1	342.8	0.0306	100.7701	BIG STONE 230/24.0KV TRANSFORMER CKT 1	
17SP	16ALL		2 TO->FROM	G16_035	ELLENDALE - J316_SUB 230.00 230KV CKT 1	342.8	0.03322	100.6656	ANTELOP-LNX3345.00 - ANTELOPE VALLEY 345KV CKT Z	
17G	16ALL		2 TO->FROM	G16_035	ELLENDALE - J316_SUB 230.00 230KV CKT 1	342.8	0.0326	100.647	ANTELOP-LNX3345.00 - ANTELOPE VALLEY 345KV CKT Z	
17G	16ALL		2 TO->FROM	G16_035	ELLENDALE - J316_SUB 230.00 230KV CKT 1	342.8	0.0326	100.647	P12:345:UMZB:# 102 #: AVS BD IN ND. AVS BRD LR	
17G	16ALL		2 TO->FROM	G16_035	ELLENDALE - J316_SUB 230.00 230KV CKT 1	342.8	0.0326	100.647	P12:345:UMZB:# 103 #: BD IN SD. LOSS OF LINE	
17SP	16ALL		2 TO->FROM	G16_035	ELLENDALE - J316_SUB 230.00 230KV CKT 1	342.8	0.03322	100.6365	P12:345:UMZB:# 102 #: AVS BD IN ND. AVS BRD LR	
17SP	16ALL		2 TO->FROM	G16_035	ELLENDALE - J316_SUB 230.00 230KV CKT 1	342.8	0.03322	100.6365	P12:345:UMZB:# 103 #: BD IN SD. LOSS OF LINE	
17G	16ALL		2 TO->FROM	G16_035	ELLENDALE - J316_SUB 230.00 230KV CKT 1	342.8	0.0326	100.5595	ANTELOP-LNX3345.00 - BRDLAND-LNX3345.00 345KV CKT 1	
17G	16ALL		2 TO->FROM	G16_035	ELLENDALE - J316_SUB 230.00 230KV CKT 1	342.8	0.0326	100.5595	BRDLAND-LNX3345.00 - HURON 345KV CKT Z	
17G	16ALL		2 TO->FROM	G16_035	ELLENDALE - J316_SUB 230.00 230KV CKT 1	342.8	0.0326	100.5595	BROADLAND - HURON 230KV CKT 1	
17G	16ALL		2 TO->FROM	G16_035	ELLENDALE - J316_SUB 230.00 230KV CKT 1	342.8	0.0326	100.5595	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	
17G	16ALL		2 TO->FROM	G16_035	ELLENDALE - J316_SUB 230.00 230KV CKT 1	342.8	0.0326	100.5595	P13:345:UMZB:# 244 #: BD IN SD. LOSS OF TX	
17SP	16ALL		2 TO->FROM	G16_035	ELLENDALE - J316_SUB 230.00 230KV CKT 1	342.8	0.03322	100.549	ANTELOP-LNX3345.00 - BRDLAND-LNX3345.00 345KV CKT 1	
17SP	16ALL		2 TO->FROM	G16_035	ELLENDALE - J316_SUB 230.00 230KV CKT 1	342.8	0.03322	100.549	BRDLAND-LNX3345.00 - HURON 345KV CKT Z	
17SP	16ALL		2 TO->FROM	G16_035	ELLENDALE - J316_SUB 230.00 230KV CKT 1	342.8	0.03322	100.549	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	
17SP	16ALL		2 TO->FROM	G16_035	ELLENDALE - J316_SUB 230.00 230KV CKT 1	342.8	0.03322	100.549	P13:345:UMZB:# 244 #: BD IN SD. LOSS OF TX	
17G	16ALL		2 TO->FROM	G16_035	ELLENDALE - J316_SUB 230.00 230KV CKT 1	342.8	0.03828	100.3761	CENTER - SQUARE BUTTE 230KV CKT 1	
17G	16ALL		2 TO->FROM	G16_035	ELLENDALE - MERRCRT4 230.00 230KV CKT 1	383	0.05241	124.0335	ELLENDALE - J316_SUB 230.00 230KV CKT 1	
17SP	16ALL		2 TO->FROM	G16_035	ELLENDALE - MERRCRT4 230.00 230KV CKT 1	383	0.05335	123.6527	ELLENDALE - J316_SUB 230.00 230KV CKT 1	
16WP	16ALL		2 TO->FROM	G16_035	ELLENDALE - MERRCRT4 230.00 230KV CKT 1	398	0.05262	118.7529	ELLENDALE - J316_SUB 230.00 230KV CKT 1	
17G	16ALL		2 FROM->TO	G16_035	ELLENDALE - OAKES 230KV CKT 1	350.8	0.05004	133.4811	ELLENDALE (ELLENDL TR1) 230/115/13.8KV TRANSFORMER CKT 1	
17SP	16ALL		2 FROM->TO	G16_035	ELLENDALE - OAKES 230KV CKT 1	351	0.05066	133.1643	ELLENDALE (ELLENDL TR1) 230/115/13.8KV TRANSFORMER CKT 1	
16WP	16ALL		2 FROM->TO	G16_035	ELLENDALE - OAKES 230KV CKT 1	350.9	0.04991	132.612	ELLENDALE (ELLENDL TR1) 230/115/13.8KV TRANSFORMER CKT 1	
17G	16ALL		2 FROM->TO	G16_035	ELLENDALE - OAKES 230KV CKT 1	350.8	0.05004	131.6567	ABERDEEN JCT - ELLENDALE 115KV CKT 1	
17G	16ALL		2 FROM->TO	G16_035	ELLENDALE - OAKES 230KV CKT 1	350.8	0.05004	131.6567	P12:115:UMZZ:# 232 #: AB IN SD. ABERDEEN A TAP BETWEEN ELLENDALE AND ABERDEEN-SIEBRECHT.	
17SP	16ALL		2 FROM->TO	G16_035	ELLENDALE - OAKES 230KV CKT 1	351	0.04797	131.1968	BUFFALO - JAMESTOWN 345KV CKT 1	
17SP	16ALL		2 FROM->TO	G16_035	ELLENDALE - OAKES 230KV CKT 1	351	0.05066	131.0845	ABERDEEN JCT - ELLENDALE 115KV CKT 1	
17SP	16ALL		2 FROM->TO	G16_035	ELLENDALE - OAKES 230KV CKT 1	351	0.05066	131.0845	P12:115:UMZZ:# 232 #: AB IN SD. ABERDEEN A TAP BETWEEN ELLENDALE AND ABERDEEN-SIEBRECHT.	
17G	16ALL		2 FROM->TO	G16_035	ELLENDALE - OAKES 230KV CKT 1	350.8	0.04783	130.2952	BUFFALO - JAMESTOWN 345KV CKT 1	
16WP	16ALL		2 FROM->TO	G16_035	ELLENDALE - OAKES 230KV CKT 1	350.9	0.04714	129.6235	BUFFALO - JAMESTOWN 345KV CKT 1	
17SP	16ALL		2 FROM->TO	G16_035	ELLENDALE - OAKES 230KV CKT 1	351	0.04835	129.3455	G09_001ST 345.00 - WATERTOWN 345KV CKT 1	
16WP	16ALL		2 FROM->TO	G16_035	ELLENDALE - OAKES 230KV CKT 1	350.9	0.04991	129.1067	ABERDEEN JCT - ELLENDALE 115KV CKT 1	
16WP	16ALL		2 FROM->TO	G16_035	ELLENDALE - OAKES 230KV CKT 1	350.9	0.04991	129.1067	P12:115:UMZZ:# 232 #: AB IN SD. ABERDEEN A TAP BETWEEN ELLENDALE AND ABERDEEN-SIEBRECHT.	
17SP	16ALL		2 FROM->TO	G16_035	ELLENDALE - OAKES 230KV CKT 1	351	0.04917	129.0042	CENTER - JAMESTOWN 345KV CKT 1	
17SP	16ALL		2 FROM->TO	G16_035	ELLENDALE - OAKES 230KV CKT 1	351	0.04835	128.6333	G09_001ST 345.00 - GROTON 345KV CKT 1	
17G	16ALL		2 FROM->TO	G16_035	ELLENDALE - OAKES 230KV CKT 1	350.8	0.05004	128.521	ABERDEEN JCT - ABERDEEN SIEBRECHT 115KV CKT 1	
17G	16ALL		2 FROM->TO	G16_035	ELLENDALE - OAKES 230KV CKT 1	350.8	0.04901	127.8967	CENTER - JAMESTOWN 345KV CKT 1	
17G	16ALL		2 FROM->TO	G16_035	ELLENDALE - OAKES 230KV CKT 1	350.8	0.04819	127.5826	G09_001ST 345.00 - WATERTOWN 345KV CKT 1	
17G	16ALL		2 FROM->TO	G16_035	ELLENDALE - OAKES 230KV CKT 1	350.8	0.04819	126.8414	G09_001ST 345.00 - GROTON 345KV CKT 1	
16WP	16ALL		2 FROM->TO	G16_035	ELLENDALE - OAKES 230KV CKT 1	350.9	0.04831	126.3138	CENTER - JAMESTOWN 345KV CKT 1	
17SP	16ALL		2 FROM->TO	G16_035	ELLENDALE - OAKES 230KV CKT 1	351	0.04107	126.3046	BUFFALO - JAMESTOWN 345KV CKT 1	
16WP	16ALL		2 FROM->TO	G16_035	ELLENDALE - OAKES 230KV CKT 1	350.9	0.04749	125.8003	G09_001ST 345.00 - WATERTOWN 345KV CKT 1	
17SP	16ALL		2 FROM->TO	G16_035	ELLENDALE - OAKES 230KV CKT 1	351	0.04107	125.7633	BIG STONE 230/24.0KV TRANSFORMER CKT 1	
17SP	16ALL		2 FROM->TO	G16_035	ELLENDALE - OAKES 230KV CKT 1	319	0.04107	125.7458	System Intact	
17G	16ALL		2 FROM->TO	G16_035	ELLENDALE - OAKES 230KV CKT 1	318.8	0.04102	125.6852	System Intact	
17SP	16ALL		2 FROM->TO	G16_035	ELLENDALE - OAKES 230KV CKT 1	351	0.04584	124.8897	BISON 3 345.00 - BUFFALO 345KV CKT 1	
16WP	16ALL		2 FROM->TO	G16_035	ELLENDALE - OAKES 230KV CKT 1	318.9	0.04037	124.6167	System Intact	
17SP	16ALL		2 FROM->TO	G16_035	ELLENDALE - OAKES 230KV CKT 1	351	0.04309	124.5129	RIEL - ROSEAU 500KV CKT 1	
17SP	16ALL		2 FROM->TO	G16_035	ELLENDALE - OAKES 230KV CKT 1	351	0.04309	124.285	ROSEAU - ROSEAU 2 500.00 500KV CKT 1	

SEASON	GROUP	SCENARIO	DIRECTION	SOURCE	MONITORED ELEMENT	RATE		CONTINGENCY		CONTINGENCY
						(MVA)	TDF	LOADING %		
17SP	16ALL	2	FROM->TO	G16_035	ELLENDALE - OAKES 230KV CKT 1	351	0.04309	124.285	ROSEAU - ROSEAUM 2 500.00 500KV CKT 1	
17G	16ALL	2	FROM->TO	G16_035	ELLENDALE - OAKES 230KV CKT 1	350.8	0.04573	124.2772	BISON 3 345.00 - BUFFALO 345KV CKT 1	
17SP	16ALL	2	FROM->TO	G16_035	ELLENDALE - OAKES 230KV CKT 1	351	0.04309	124.0285	FORBES - ROSEAU 500KV CKT 1	
17SP	16ALL	2	FROM->TO	G16_035	ELLENDALE - OAKES 230KV CKT 1	351	0.05066	123.8765	ABERDEEN JCT - ABERDEEN SIEBRECHT 115KV CKT 1	
16WP	16ALL	2	FROM->TO	G16_035	ELLENDALE - OAKES 230KV CKT 1	350.9	0.04991	123.4071	ABERDEEN JCT - ABERDEEN SIEBRECHT 115KV CKT 1	
17G	16ALL	2	FROM->TO	G16_035	ELLENDALE - OAKES 230KV CKT 1	350.8	0.04102	123.3707	P12:230:UMZW:# 1770 #: FB IN SD. FB-BIGSTONE LINE FAULT	
16WP	16ALL	2	FROM->TO	G16_035	ELLENDALE - OAKES 230KV CKT 1	350.9	0.04505	123.3559	BISON 3 345.00 - BUFFALO 345KV CKT 1	
17G	16ALL	2	FROM->TO	G16_035	ELLENDALE - OAKES 230KV CKT 1	350.8	0.04102	122.9716	BIG STONE 230/24.0KV TRANSFORMER CKT 1	
16WP	16ALL	2	FROM->TO	G16_035	ELLENDALE - OAKES 230KV CKT 1	350.9	0.04037	122.5143	ELLENDALE - J316_SUB 230.00 230KV CKT 1	
17G	16ALL	2	FROM->TO	G16_035	ELLENDALE - OAKES 230KV CKT 1	350.8	0.04302	122.5135	RIEL - ROSEAU 500KV CKT 1	
17G	16ALL	2	FROM->TO	G16_035	ELLENDALE - OAKES 230KV CKT 1	350.8	0.04302	122.3425	ROSEAU - ROSEAUM 2 500.00 500KV CKT 1	
17G	16ALL	2	FROM->TO	G16_035	ELLENDALE - OAKES 230KV CKT 1	350.8	0.04302	122.3425	ROSEAU - ROSEAUM 2 500.00 500KV CKT 1	
17G	16ALL	2	FROM->TO	G16_035	ELLENDALE - OAKES 230KV CKT 1	350.8	0.04302	122.2	FORBES - ROSEAU 500KV CKT 1	
16WP	16ALL	2	FROM->TO	G16_035	ELLENDALE - OAKES 230KV CKT 1	350.9	0.04037	122.0583	BIG STONE 230/24.0KV TRANSFORMER CKT 1	
16WP	16ALL	2	FROM->TO	G16_035	ELLENDALE - OAKES 230KV CKT 1	350.9	0.04235	119.5719	RIEL - ROSEAU 500KV CKT 1	
16WP	16ALL	2	FROM->TO	G16_035	ELLENDALE - OAKES 230KV CKT 1	350.9	0.04235	119.4864	ROSEAU - ROSEAUM 2 500.00 500KV CKT 1	
16WP	16ALL	2	FROM->TO	G16_035	ELLENDALE - OAKES 230KV CKT 1	350.9	0.04235	119.4864	ROSEAU - ROSEAUM 2 500.00 500KV CKT 1	
16WP	16ALL	2	FROM->TO	G16_035	ELLENDALE - OAKES 230KV CKT 1	350.9	0.04235	119.4009	FORBES - ROSEAU 500KV CKT 1	
17G	16ALL	2	FROM->TO	G16_035	ELLENDALE - OAKES 230KV CKT 1	350.8	0.04288	118.9018	CENTER - CNTSHNT3 345.00 345KV CKT Z1	
17G	16ALL	2	FROM->TO	G16_035	ELLENDALE - OAKES 230KV CKT 1	350.8	0.04288	118.9018	CNTSHNT3 345.00 - PRAIRIE3 345.00 345KV CKT 1	
16WP	16ALL	2	FROM->TO	G16_035	ELLENDALE - OAKES 230KV CKT 1	350.9	0.04222	118.5001	CENTER - CNTSHNT3 345.00 345KV CKT Z1	
16WP	16ALL	2	FROM->TO	G16_035	ELLENDALE - OAKES 230KV CKT 1	350.9	0.04222	118.5001	CNTSHNT3 345.00 - PRAIRIE3 345.00 345KV CKT 1	
17G	16ALL	2	FROM->TO	G16_035	ELLENDALE - OAKES 230KV CKT 1	350.8	0.04304	116.2738	ABERDEEN SIEBRECHT - GROTON 115KV CKT 1	
17SP	16ALL	2	FROM->TO	G16_035	ELLENDALE - OAKES 230KV CKT 1	351	0.03393	116.0153	BIG STONE - BROWNS VALLEY 230KV CKT 1	
17SP	16ALL	2	FROM->TO	G16_035	ELLENDALE - OAKES 230KV CKT 1	351	0.04269	115.8049	ABERDEEN SIEBRECHT - GROTON 115KV CKT 1	
16WP	16ALL	2	FROM->TO	G16_035	ELLENDALE - OAKES 230KV CKT 1	350.9	0.04196	115.5637	ABERDEEN SIEBRECHT - GROTON 115KV CKT 1	
16WP	16ALL	2	FROM->TO	G16_035	ELLENDALE - OAKES 230KV CKT 1	350.9	0.03334	114.8409	BIG STONE - BROWNS VALLEY 230KV CKT 1	
17SP	16ALL	2	FROM->TO	G16_035	ELLENDALE - OAKES 230KV CKT 1	351	0.04298	113.5336	P12:345:UMZB:# 109 #: LOS GRT IN ND. LOS GRT	
17G	16ALL	2	FROM->TO	G16_035	ELLENDALE - OAKES 230KV CKT 1	350.8	0.04288	113.3657	P12:345:UMZB:# 109 #: LOS GRT IN ND. LOS GRT	
16WP	16ALL	2	FROM->TO	G16_035	ELLENDALE - OAKES 230KV CKT 1	350.9	0.04225	112.302	P12:345:UMZB:# 109 #: LOS GRT IN ND. LOS GRT	
25SP	16ALL	2	TO->FROM	G16_035	ELLENDLMVP4 230.00 - J316_SUB 230.00 230KV CKT 1	342.5	0.072	179.3298	ELLENDLMVP4 230.00 - MERRCRT4 230.00 230KV CKT 1	
20SP	16ALL	2	TO->FROM	G16_035	ELLENDLMVP4 230.00 - J316_SUB 230.00 230KV CKT 1	342.5	0.07182	175.9225	ELLENDLMVP4 230.00 - MERRCRT4 230.00 230KV CKT 1	
20WP	16ALL	2	TO->FROM	G16_035	ELLENDLMVP4 230.00 - J316_SUB 230.00 230KV CKT 1	342.9	0.07072	165.5465	ELLENDLMVP4 230.00 - MERRCRT4 230.00 230KV CKT 1	
20L	16ALL	2	TO->FROM	G16_035	ELLENDLMVP4 230.00 - J316_SUB 230.00 230KV CKT 1	342.5	0.06789	151.713	ELLENDLMVP4 230.00 - MERRCRT4 230.00 230KV CKT 1	
25SP	16ALL	2	TO->FROM	G16_035	ELLENDLMVP4 230.00 - J316_SUB 230.00 230KV CKT 1	342.5	0.04578	129.8039	BUFFALO - JAMESTOWN 345KV CKT 1	
25SP	16ALL	2	TO->FROM	G16_035	ELLENDLMVP4 230.00 - J316_SUB 230.00 230KV CKT 1	342.5	0.04338	128.2354	RIEL - ROSEAU 500KV CKT 1	
25SP	16ALL	2	TO->FROM	G16_035	ELLENDLMVP4 230.00 - J316_SUB 230.00 230KV CKT 1	342.5	0.04338	128.0018	ROSEAU - ROSEAUM 2 500.00 500KV CKT 1	
25SP	16ALL	2	TO->FROM	G16_035	ELLENDLMVP4 230.00 - J316_SUB 230.00 230KV CKT 1	342.5	0.04338	128.0018	ROSEAU - ROSEAUM 2 500.00 500KV CKT 1	
25SP	16ALL	2	TO->FROM	G16_035	ELLENDLMVP4 230.00 - J316_SUB 230.00 230KV CKT 1	342.5	0.04338	127.7683	FORBES - ROSEAU 500KV CKT 1	
20SP	16ALL	2	TO->FROM	G16_035	ELLENDLMVP4 230.00 - J316_SUB 230.00 230KV CKT 1	342.5	0.04567	127.3226	BUFFALO - JAMESTOWN 345KV CKT 1	
25SP	16ALL	2	TO->FROM	G16_035	ELLENDLMVP4 230.00 - J316_SUB 230.00 230KV CKT 1	342.5	0.04617	127.0872	CENTER - JAMESTOWN 345KV CKT 1	
20SP	16ALL	2	TO->FROM	G16_035	ELLENDLMVP4 230.00 - J316_SUB 230.00 230KV CKT 1	342.5	0.04329	126.752	RIEL - ROSEAU 500KV CKT 1	
25SP	16ALL	2	TO->FROM	G16_035	ELLENDLMVP4 230.00 - J316_SUB 230.00 230KV CKT 1	318.5	0.04133	126.5493	System Intact	
20SP	16ALL	2	TO->FROM	G16_035	ELLENDLMVP4 230.00 - J316_SUB 230.00 230KV CKT 1	342.5	0.04329	126.4893	ROSEAU - ROSEAUM 2 500.00 500KV CKT 1	
20SP	16ALL	2	TO->FROM	G16_035	ELLENDLMVP4 230.00 - J316_SUB 230.00 230KV CKT 1	342.5	0.04329	126.4893	ROSEAU - ROSEAUM 2 500.00 500KV CKT 1	
20SP	16ALL	2	TO->FROM	G16_035	ELLENDLMVP4 230.00 - J316_SUB 230.00 230KV CKT 1	342.5	0.04329	126.2265	FORBES - ROSEAU 500KV CKT 1	
25SP	16ALL	2	TO->FROM	G16_035	ELLENDLMVP4 230.00 - J316_SUB 230.00 230KV CKT 1	342.5	0.04444	125.3256	BISON 3 345.00 - BUFFALO 345KV CKT 1	
20SP	16ALL	2	TO->FROM	G16_035	ELLENDLMVP4 230.00 - J316_SUB 230.00 230KV CKT 1	342.5	0.04606	124.6059	CENTER - JAMESTOWN 345KV CKT 1	
20SP	16ALL	2	TO->FROM	G16_035	ELLENDLMVP4 230.00 - J316_SUB 230.00 230KV CKT 1	318.5	0.04122	124.449	System Intact	
25SP	16ALL	2	TO->FROM	G16_035	ELLENDLMVP4 230.00 - J316_SUB 230.00 230KV CKT 1	342.5	0.04655	123.5481	P12:345:UMZB:# 109 #: LOS GRT IN ND. LOS GRT	
25SP	16ALL	2	TO->FROM	G16_035	ELLENDLMVP4 230.00 - J316_SUB 230.00 230KV CKT 1	342.5	0.04464	123.1797	ANTELOP-LNX3345.00 - ANTELOPE VALLEY 345KV CKT Z	
25SP	16ALL	2	TO->FROM	G16_035	ELLENDLMVP4 230.00 - J316_SUB 230.00 230KV CKT 1	342.5	0.04464	123.1797	P12:345:UMZB:# 102 #: AVS BD IN ND. AVS BRD LR	
20SP	16ALL	2	TO->FROM	G16_035	ELLENDLMVP4 230.00 - J316_SUB 230.00 230KV CKT 1	342.5	0.04433	123.0487	BISON 3 345.00 - BUFFALO 345KV CKT 1	
25SP	16ALL	2	TO->FROM	G16_035	ELLENDLMVP4 230.00 - J316_SUB 230.00 230KV CKT 1	342.5	0.04133	122.3239	MISSION - ST FRANCIS 115KV CKT 1	
25SP	16ALL	2	TO->FROM	G16_035	ELLENDLMVP4 230.00 - J316_SUB 230.00 230KV CKT 1	342.5	0.04133	121.9736	BIG STONE 230/24.0KV TRANSFORMER CKT 1	

SEASON	GROUP	SCENARIO	DIRECTION	SOURCE	MONITORED ELEMENT	RATE		CONTINGENCY		CONTINGENCY
						(MVA)	TDF	LOADING %		
25SP	16ALL	2	TO->FROM	G16_035	ELLENDLMVP4 230.00 - J316_SUB 230.00 230KV CKT 1	342.5	0.04655	121.6602	LELAND OLDS - LELAND1-LNX3345.00 345KV CKT Z	
25SP	16ALL	2	TO->FROM	G16_035	ELLENDLMVP4 230.00 - J316_SUB 230.00 230KV CKT 1	342.5	0.04655	121.5142	G16-044-TAP 345.00 - LELAND1-LNX3345.00 345KV CKT 1	
20SP	16ALL	2	TO->FROM	G16_035	ELLENDLMVP4 230.00 - J316_SUB 230.00 230KV CKT 1	342.5	0.04642	121.4146	P12:345:UMZB:# 109 #: LOS GRT IN ND. LOS GRT	
25SP	16ALL	2	TO->FROM	G16_035	ELLENDLMVP4 230.00 - J316_SUB 230.00 230KV CKT 1	342.5	0.04263	121.3929	CENTER - CNTSHNT3 345.00 345KV CKT Z1	
25SP	16ALL	2	TO->FROM	G16_035	ELLENDLMVP4 230.00 - J316_SUB 230.00 230KV CKT 1	342.5	0.04263	121.3929	CNTSHNT3 345.00 - PRAIRIE3 345.00 345KV CKT 1	
20SP	16ALL	2	TO->FROM	G16_035	ELLENDLMVP4 230.00 - J316_SUB 230.00 230KV CKT 1	342.5	0.04452	121.1337	ANTELOP-LNX3345.00 - ANTELOPE VALLEY 345KV CKT Z	
20SP	16ALL	2	TO->FROM	G16_035	ELLENDLMVP4 230.00 - J316_SUB 230.00 230KV CKT 1	342.5	0.04452	121.1337	P12:345:UMZB:# 102 #: AVS BD IN ND. AVS BRD LR	
20SP	16ALL	2	TO->FROM	G16_035	ELLENDLMVP4 230.00 - J316_SUB 230.00 230KV CKT 1	342.5	0.04452	121.1045	P12:345:UMZB:# 103 #: BD IN SD. LOSS OF LINE	
20SP	16ALL	2	TO->FROM	G16_035	ELLENDLMVP4 230.00 - J316_SUB 230.00 230KV CKT 1	342.5	0.04452	121.017	BRDLAND-LNX3345.00 - HURON 345KV CKT Z	
20WP	16ALL	2	TO->FROM	G16_035	ELLENDLMVP4 230.00 - J316_SUB 230.00 230KV CKT 1	342.9	0.04493	120.7401	BUFFALO - JAMESTOWN 345KV CKT 1	
20SP	16ALL	2	TO->FROM	G16_035	ELLENDLMVP4 230.00 - J316_SUB 230.00 230KV CKT 1	342.5	0.04122	120.3416	CHISAGO COUNTY - CHISAGO COUNTY 500KV CKT 1	
20SP	16ALL	2	TO->FROM	G16_035	ELLENDLMVP4 230.00 - J316_SUB 230.00 230KV CKT 1	342.5	0.04122	119.962	BIG STONE 230/24.0KV TRANSFORMER CKT 1	
20SP	16ALL	2	TO->FROM	G16_035	ELLENDLMVP4 230.00 - J316_SUB 230.00 230KV CKT 1	342.5	0.04642	119.524	LELAND OLDS - LELAND1-LNX3345.00 345KV CKT Z	
20SP	16ALL	2	TO->FROM	G16_035	ELLENDLMVP4 230.00 - J316_SUB 230.00 230KV CKT 1	342.5	0.04642	119.4072	G16-044-TAP 345.00 - LELAND1-LNX3345.00 345KV CKT 1	
25SP	16ALL	2	TO->FROM	G16_035	ELLENDLMVP4 230.00 - J316_SUB 230.00 230KV CKT 1	342.5	0.03116	119.2807	GRANTE FALLS - MANDAN 4 230.00 230KV CKT 1	
25SP	16ALL	2	TO->FROM	G16_035	ELLENDLMVP4 230.00 - J316_SUB 230.00 230KV CKT 1	342.5	0.03116	118.4924	BISMARCK - GRANTE FALLS 230KV CKT 1	
20WP	16ALL	2	TO->FROM	G16_035	ELLENDLMVP4 230.00 - J316_SUB 230.00 230KV CKT 1	318.9	0.0406	118.0013	System Intact	
20WP	16ALL	2	TO->FROM	G16_035	ELLENDLMVP4 230.00 - J316_SUB 230.00 230KV CKT 1	342.9	0.04531	117.8198	CENTER - JAMESTOWN 345KV CKT 1	
20SP	16ALL	2	TO->FROM	G16_035	ELLENDLMVP4 230.00 - J316_SUB 230.00 230KV CKT 1	342.5	0.03106	116.8312	GRANTE FALLS - MANDAN 4 230.00 230KV CKT 1	
20WP	16ALL	2	TO->FROM	G16_035	ELLENDLMVP4 230.00 - J316_SUB 230.00 230KV CKT 1	342.9	0.04259	116.7102	RIEL - ROSEAU 500KV CKT 1	
20WP	16ALL	2	TO->FROM	G16_035	ELLENDLMVP4 230.00 - J316_SUB 230.00 230KV CKT 1	342.9	0.04259	116.5935	ROSEAU - ROSEAU 2 500.00 500KV CKT 1	
20WP	16ALL	2	TO->FROM	G16_035	ELLENDLMVP4 230.00 - J316_SUB 230.00 230KV CKT 1	342.9	0.04259	116.5935	ROSEAU - ROSEAU 2 500.00 500KV CKT 1	
20WP	16ALL	2	TO->FROM	G16_035	ELLENDLMVP4 230.00 - J316_SUB 230.00 230KV CKT 1	342.9	0.04362	116.5691	BISON 3 345.00 - BUFFALO 345KV CKT 1	
20WP	16ALL	2	TO->FROM	G16_035	ELLENDLMVP4 230.00 - J316_SUB 230.00 230KV CKT 1	342.9	0.04259	116.5061	FORBES - ROSEAU 500KV CKT 1	
20SP	16ALL	2	TO->FROM	G16_035	ELLENDLMVP4 230.00 - J316_SUB 230.00 230KV CKT 1	342.5	0.03106	116.1597	BISMARCK - GRANTE FALLS 230KV CKT 1	
20WP	16ALL	2	TO->FROM	G16_035	ELLENDLMVP4 230.00 - J316_SUB 230.00 230KV CKT 1	342.9	0.04381	114.2454	ANTELOP-LNX3345.00 - ANTELOPE VALLEY 345KV CKT Z	
20WP	16ALL	2	TO->FROM	G16_035	ELLENDLMVP4 230.00 - J316_SUB 230.00 230KV CKT 1	342.9	0.04381	114.2454	P12:345:UMZB:# 102 #: AVS BD IN ND. AVS BRD LR	
20WP	16ALL	2	TO->FROM	G16_035	ELLENDLMVP4 230.00 - J316_SUB 230.00 230KV CKT 1	342.9	0.04381	114.2454	P12:345:UMZB:# 103 #: BD IN SD. LOSS OF LINE	
20WP	16ALL	2	TO->FROM	G16_035	ELLENDLMVP4 230.00 - J316_SUB 230.00 230KV CKT 1	342.9	0.04381	114.1871	ANTELOP-LNX3345.00 - BRDLAND-LNX3345.00 345KV CKT 1	
20WP	16ALL	2	TO->FROM	G16_035	ELLENDLMVP4 230.00 - J316_SUB 230.00 230KV CKT 1	342.9	0.04566	114.1046	P12:345:UMZB:# 109 #: LOS GRT IN ND. LOS GRT	
20WP	16ALL	2	TO->FROM	G16_035	ELLENDLMVP4 230.00 - J316_SUB 230.00 230KV CKT 1	342.9	0.0406	114.0875	BISON 3 345.00 - BUFFALO 345KV CKT 1	
20WP	16ALL	2	TO->FROM	G16_035	ELLENDLMVP4 230.00 - J316_SUB 230.00 230KV CKT 1	342.9	0.0406	113.8834	BIG STONE 230/24.0KV TRANSFORMER CKT 1	
20WP	16ALL	2	TO->FROM	G16_035	ELLENDLMVP4 230.00 - J316_SUB 230.00 230KV CKT 1	342.9	0.04186	113.4971	CENTER - CNTSHNT3 345.00 345KV CKT Z1	
20WP	16ALL	2	TO->FROM	G16_035	ELLENDLMVP4 230.00 - J316_SUB 230.00 230KV CKT 1	342.9	0.04186	113.4971	CNTSHNT3 345.00 - PRAIRIE3 345.00 345KV CKT 1	
20WP	16ALL	2	TO->FROM	G16_035	ELLENDLMVP4 230.00 - J316_SUB 230.00 230KV CKT 1	342.9	0.04566	112.1605	LELAND OLDS - LELAND1-LNX3345.00 345KV CKT Z	
20WP	16ALL	2	TO->FROM	G16_035	ELLENDLMVP4 230.00 - J316_SUB 230.00 230KV CKT 1	342.9	0.04566	112.1022	G16-044-TAP 345.00 - LELAND1-LNX3345.00 345KV CKT 1	
20WP	16ALL	2	TO->FROM	G16_035	ELLENDLMVP4 230.00 - J316_SUB 230.00 230KV CKT 1	342.9	0.03047	110.8541	GRANTE FALLS - MANDAN 4 230.00 230KV CKT 1	
20L	16ALL	2	TO->FROM	G16_035	ELLENDLMVP4 230.00 - J316_SUB 230.00 230KV CKT 1	342.5	0.04373	110.5725	G16-044-TAP 345.00 - GROTON-LNX3 345.00 345KV CKT 1	
20L	16ALL	2	TO->FROM	G16_035	ELLENDLMVP4 230.00 - J316_SUB 230.00 230KV CKT 1	342.5	0.04373	110.5725	GROTON - GROTON-LNX3 345.00 345KV CKT Z	
20L	16ALL	2	TO->FROM	G16_035	ELLENDLMVP4 230.00 - J316_SUB 230.00 230KV CKT 1	318.5	0.03897	109.4026	System Intact	
20L	16ALL	2	TO->FROM	G16_035	ELLENDLMVP4 230.00 - J316_SUB 230.00 230KV CKT 1	342.5	0.04311	109.3982	BUFFALO - JAMESTOWN 345KV CKT 1	
20L	16ALL	2	TO->FROM	G16_035	ELLENDLMVP4 230.00 - J316_SUB 230.00 230KV CKT 1	342.5	0.04089	109.1614	RIEL - ROSEAU 500KV CKT 1	
20L	16ALL	2	TO->FROM	G16_035	ELLENDLMVP4 230.00 - J316_SUB 230.00 230KV CKT 1	342.5	0.04089	109.0446	ROSEAU - ROSEAU 2 500.00 500KV CKT 1	
20L	16ALL	2	TO->FROM	G16_035	ELLENDLMVP4 230.00 - J316_SUB 230.00 230KV CKT 1	342.5	0.04089	109.0446	ROSEAU - ROSEAU 2 500.00 500KV CKT 1	
20L	16ALL	2	TO->FROM	G16_035	ELLENDLMVP4 230.00 - J316_SUB 230.00 230KV CKT 1	342.5	0.04089	108.9278	FORBES - ROSEAU 500KV CKT 1	
20L	16ALL	2	TO->FROM	G16_035	ELLENDLMVP4 230.00 - J316_SUB 230.00 230KV CKT 1	342.5	0.04348	107.1116	CENTER - JAMESTOWN 345KV CKT 1	
20L	16ALL	2	TO->FROM	G16_035	ELLENDLMVP4 230.00 - J316_SUB 230.00 230KV CKT 1	342.5	0.04186	106.6102	BISON 3 345.00 - BUFFALO 345KV CKT 1	
20L	16ALL	2	TO->FROM	G16_035	ELLENDLMVP4 230.00 - J316_SUB 230.00 230KV CKT 1	342.5	0.04199	106.1952	ANTELOP-LNX3345.00 - ANTELOPE VALLEY 345KV CKT Z	
20L	16ALL	2	TO->FROM	G16_035	ELLENDLMVP4 230.00 - J316_SUB 230.00 230KV CKT 1	342.5	0.04199	106.1952	P12:345:UMZB:# 102 #: AVS BD IN ND. AVS BRD LR	
20L	16ALL	2	TO->FROM	G16_035	ELLENDLMVP4 230.00 - J316_SUB 230.00 230KV CKT 1	342.5	0.04199	106.1952	P12:345:UMZB:# 103 #: BD IN SD. LOSS OF LINE	
20L	16ALL	2	TO->FROM	G16_035	ELLENDLMVP4 230.00 - J316_SUB 230.00 230KV CKT 1	342.5	0.04199	106.1368	ANTELOP-LNX3345.00 - BRDLAND-LNX3345.00 345KV CKT 1	
20L	16ALL	2	TO->FROM	G16_035	ELLENDLMVP4 230.00 - J316_SUB 230.00 230KV CKT 1	342.5	0.04199	106.1368	BRDLAND-LNX3345.00 - HURON 345KV CKT Z	
20L	16ALL	2	TO->FROM	G16_035	ELLENDLMVP4 230.00 - J316_SUB 230.00 230KV CKT 1	342.5	0.03897	105.9408	BISON 3 345.00 - BUFFALO 345KV CKT 1	
20L	16ALL	2	TO->FROM	G16_035	ELLENDLMVP4 230.00 - J316_SUB 230.00 230KV CKT 1	342.5	0.03897	105.6488	BIG STONE 230/24.0KV TRANSFORMER CKT 1	
20L	16ALL	2	TO->FROM	G16_035	ELLENDLMVP4 230.00 - J316_SUB 230.00 230KV CKT 1	342.5	0.04373	105.6141	P12:345:UMZB:# 109 #: LOS GRT IN ND. LOS GRT	

SEASON	GROUP	SCENARIO	DIRECTION	SOURCE	MONITORED ELEMENT	RATE		CONTINGENCY		CONTINGENCY
						(MVA)	TDF	LOADING %		
20L	16ALL		2 TO->FROM	G16_035	ELLENDLMVP4 230.00 - J316_SUB 230.00 230KV CKT 1	342.5	0.04373	103.6678	LELAND OLDS - LELAND1-LNX3345.00 345KV CKT 2	
20L	16ALL		2 TO->FROM	G16_035	ELLENDLMVP4 230.00 - J316_SUB 230.00 230KV CKT 1	342.5	0.04373	103.6094	G16-044-TAP 345.00 - LELAND1-LNX3345.00 345KV CKT 1	
25SP	16ALL		2 TO->FROM	G16_035	ELLENDLMVP4 230.00 - MERRCRT4 230.00 230KV CKT 1	382.1	0.07042	153.3917	ELLENDLMVP4 230.00 - J316_SUB 230.00 230KV CKT 1	
20SP	16ALL		2 TO->FROM	G16_035	ELLENDLMVP4 230.00 - MERRCRT4 230.00 230KV CKT 1	382.1	0.07024	150.4183	ELLENDLMVP4 230.00 - J316_SUB 230.00 230KV CKT 1	
20WP	16ALL		2 TO->FROM	G16_035	ELLENDLMVP4 230.00 - MERRCRT4 230.00 230KV CKT 1	382.6	0.06917	141.294	ELLENDLMVP4 230.00 - J316_SUB 230.00 230KV CKT 1	
20L	16ALL		2 TO->FROM	G16_035	ELLENDLMVP4 230.00 - MERRCRT4 230.00 230KV CKT 1	382.6	0.0664	129.0151	ELLENDLMVP4 230.00 - J316_SUB 230.00 230KV CKT 1	
25SP	16ALL		2 TO->FROM	G16_035	ELLENDLMVP4 230.00 - MERRCRT4 230.00 230KV CKT 1	382.1	0.07042	120.5207	J316_SUB 230.00 - TATANKA 230KV CKT 1	
20SP	16ALL		2 TO->FROM	G16_035	ELLENDLMVP4 230.00 - MERRCRT4 230.00 230KV CKT 1	382.1	0.07024	117.495	J316_SUB 230.00 - TATANKA 230KV CKT 1	
20WP	16ALL		2 TO->FROM	G16_035	ELLENDLMVP4 230.00 - MERRCRT4 230.00 230KV CKT 1	382.6	0.06917	108.3614	J316_SUB 230.00 - TATANKA 230KV CKT 1	
25SP	16ALL		2 FROM->TO	G16_035	ELLENDLMVP4 230.00 - OAKES 230KV CKT 1	350.2	0.0438	125.8836	ELLENDLMVP3 345.00 (1) 345/230/34.5KV TRANSFORMER CKT 1	
25SP	16ALL		2 FROM->TO	G16_035	ELLENDLMVP4 230.00 - OAKES 230KV CKT 1	350.2	0.0438	125.027	BSSOUTH3 345.00 - ELLENDLMVP3 345.00 345KV CKT 1	
20SP	16ALL		2 FROM->TO	G16_035	ELLENDLMVP4 230.00 - OAKES 230KV CKT 1	349.9	0.04365	123.1524	ELLENDLMVP3 345.00 (1) 345/230/34.5KV TRANSFORMER CKT 1	
20SP	16ALL		2 FROM->TO	G16_035	ELLENDLMVP4 230.00 - OAKES 230KV CKT 1	349.9	0.04365	122.295	BSSOUTH3 345.00 - ELLENDLMVP3 345.00 345KV CKT 1	
20WP	16ALL		2 FROM->TO	G16_035	ELLENDLMVP4 230.00 - OAKES 230KV CKT 1	350.9	0.04286	117.9832	ELLENDLMVP3 345.00 (1) 345/230/34.5KV TRANSFORMER CKT 1	
20WP	16ALL		2 FROM->TO	G16_035	ELLENDLMVP4 230.00 - OAKES 230KV CKT 1	350.9	0.04286	117.3848	BSSOUTH3 345.00 - ELLENDLMVP3 345.00 345KV CKT 1	
20L	16ALL		2 FROM->TO	G16_035	ELLENDLMVP4 230.00 - OAKES 230KV CKT 1	349.3	0.04144	101.727	ELLENDLMVP3 345.00 (1) 345/230/34.5KV TRANSFORMER CKT 1	
20L	16ALL		2 FROM->TO	G16_035	ELLENDLMVP4 230.00 - OAKES 230KV CKT 1	349.3	0.04144	101.1258	BSSOUTH3 345.00 - ELLENDLMVP3 345.00 345KV CKT 1	
25SP	16ALL		2 FROM->TO	G16_035	FARGO - SHEYNN 230KV CKT 1	328.4	0.10226	154.7336	BUFFALO - JAMESTOWN 345KV CKT 1	
20SP	16ALL		2 FROM->TO	G16_035	FARGO - SHEYNN 230KV CKT 1	333	0.10231	149.6232	BUFFALO - JAMESTOWN 345KV CKT 1	
17SP	16ALL		2 FROM->TO	G16_035	FARGO - SHEYNN 230KV CKT 1	330.1	0.10298	146.1385	BUFFALO - JAMESTOWN 345KV CKT 1	
25SP	16ALL		2 FROM->TO	G16_035	FARGO - SHEYNN 230KV CKT 1	328.4	0.1024	131.4802	CENTER - JAMESTOWN 345KV CKT 1	
20SP	16ALL		2 FROM->TO	G16_035	FARGO - SHEYNN 230KV CKT 1	333	0.10245	126.9612	CENTER - JAMESTOWN 345KV CKT 1	
17SP	16ALL		2 FROM->TO	G16_035	FARGO - SHEYNN 230KV CKT 1	330.1	0.1029	125.776	CENTER - JAMESTOWN 345KV CKT 1	
25SP	16ALL		2 FROM->TO	G16_035	FARGO - SHEYNN 230KV CKT 1	328.4	0.09137	118.8337	BISON 3 345.00 - BUFFALO 345KV CKT 1	
20SP	16ALL		2 FROM->TO	G16_035	FARGO - SHEYNN 230KV CKT 1	333	0.09139	115.7754	BISON 3 345.00 - BUFFALO 345KV CKT 1	
17SP	16ALL		2 FROM->TO	G16_035	FARGO - SHEYNN 230KV CKT 1	330.1	0.09172	112.2891	BISON 3 345.00 - BUFFALO 345KV CKT 1	
20SP	16ALL		2 FROM->TO	G16_035	FARGO - SHEYNN 230KV CKT 1	333	0.07911	103.4956	RIEL - ROSEAU 500KV CKT 1	
20SP	16ALL		2 FROM->TO	G16_035	FARGO - SHEYNN 230KV CKT 1	333	0.07911	102.7749	ROSEAU - ROSEAU 2 500.00 500KV CKT 1	
20SP	16ALL		2 FROM->TO	G16_035	FARGO - SHEYNN 230KV CKT 1	333	0.07911	102.7749	ROSEAU - ROSEAU 2 500.00 500KV CKT 1	
20SP	16ALL		2 FROM->TO	G16_035	FARGO - SHEYNN 230KV CKT 1	333	0.07911	101.9941	FORBES - ROSEAU 500KV CKT 1	
25SP	16ALL		2 FROM->TO	G16_035	FARGO - SHEYNN 230KV CKT 1	328.4	0.07882	101.868	RIEL - ROSEAU 500KV CKT 1	
25SP	16ALL		2 FROM->TO	G16_035	FARGO - SHEYNN 230KV CKT 1	328.4	0.07882	101.2286	ROSEAU - ROSEAU 2 500.00 500KV CKT 1	
25SP	16ALL		2 FROM->TO	G16_035	FARGO - SHEYNN 230KV CKT 1	328.4	0.07882	101.2286	ROSEAU - ROSEAU 2 500.00 500KV CKT 1	
17SP	16ALL		2 FROM->TO	G16_035	FARGO - SHEYNN 230KV CKT 1	330.1	0.07924	101.0807	RIEL - ROSEAU 500KV CKT 1	
25SP	16ALL		2 FROM->TO	G16_035	FARGO - SHEYNN 230KV CKT 1	328.4	0.07882	100.5586	FORBES - ROSEAU 500KV CKT 1	
17SP	16ALL		2 FROM->TO	G16_035	FARGO - SHEYNN 230KV CKT 1	330.1	0.07924	100.3233	ROSEAU - ROSEAU 2 500.00 500KV CKT 1	
17SP	16ALL		2 FROM->TO	G16_035	FARGO - SHEYNN 230KV CKT 1	330.1	0.07924	100.3233	ROSEAU - ROSEAU 2 500.00 500KV CKT 1	
17SP	16ALL		2 FROM->TO	G16_035	FERGSFL4 230.00 - GRE-SILVRLK4230.00 230KV CKT 1	270.2	0.03611	100.8249	ALEXMRES3 345.00 - BISON 3 345.00 345KV CKT 1	
17SP	16ALL		2 TO->FROM	G16_035	FORMAN - OAKES 230KV CKT 1	446.8	0.04988	103.0008	BUFFALO - JAMESTOWN 345KV CKT 1	
17G	16ALL		2 TO->FROM	G16_035	FORMAN - OAKES 230KV CKT 1	446.2	0.0497	101.9826	BUFFALO - JAMESTOWN 345KV CKT 1	
17G	16ALL		2 TO->FROM	G16_035	FORMAN - OAKES 230KV CKT 1	446.2	0.05008	101.0913	ELLENDALE (ELLENDL TR1) 230/115/13.8KV TRANSFORMER CKT 1	
17SP	16ALL		2 TO->FROM	G16_035	FORMAN - OAKES 230KV CKT 1	446.8	0.05071	101.0146	ELLENDALE (ELLENDL TR1) 230/115/13.8KV TRANSFORMER CKT 1	
25SP	16ALL		2 FROM->TO	G16_035	HESKETT - MANDAN 7 115.00 115KV CKT 1	130.9	0.03389	112.4302	BISMARCK EXPRESSWAY - EAST BISMARCK 115KV CKT 1	
25SP	16ALL		2 FROM->TO	G16_035	HESKETT - MANDAN 7 115.00 115KV CKT 1	130.9	0.03116	112.4109	HESKETT (HESKETT TR1) 230/115/13.8KV TRANSFORMER CKT 1	
25SP	16ALL		2 FROM->TO	G16_035	HESKETT - MANDAN 7 115.00 115KV CKT 1	130.9	0.03389	104.7908	BISMARCK EXPRESSWAY - 5TH9TH 7 115.00 115KV CKT 1	
20SP	16ALL		2 FROM->TO	G16_035	HESKETT - MANDAN 7 115.00 115KV CKT 1	130.9	0.03389	100.5127	BISMARCK EXPRESSWAY - EAST BISMARCK 115KV CKT 1	
25SP	16ALL		2 FROM->TO	G16_035	HESKETT - WISHEK 230KV CKT 1	256.9	0.08467	103.5926	BUFFALO - JAMESTOWN 345KV CKT 1	
25SP	16ALL		2 FROM->TO	G16_035	HESKETT - WISHEK 230KV CKT 1	256.9	0.08609	100.1962	G16-044-TAP 345.00 - GROTON-LNX3 345.00 345KV CKT 1	
25SP	16ALL		2 FROM->TO	G16_035	HESKETT - WISHEK 230KV CKT 1	256.9	0.08609	100.1962	GROTON - GROTON-LNX3 345.00 345KV CKT 2	
25SP	16ALL		2 FROM->TO	G16_035	HESKETT (HESKETT TR1) 230/115/13.8KV TRANSFORMER CKT 1	124.3	0.05993	115.874	HESKETT - MANDAN 4 230.00 230KV CKT 1	
25SP	16ALL		2 FROM->TO	G16_035	HESKETT (HESKETT TR1) 230/115/13.8KV TRANSFORMER CKT 1	124.4	0.05993	115.7808	HESKETT - MANDAN 4 230.00 230KV CKT 1	
20SP	16ALL		2 FROM->TO	G16_035	HESKETT (HESKETT TR1) 230/115/13.8KV TRANSFORMER CKT 1	124.4	0.05978	106.5893	HESKETT - MANDAN 4 230.00 230KV CKT 1	
20SP	16ALL		2 FROM->TO	G16_035	HESKETT (HESKETT TR1) 230/115/13.8KV TRANSFORMER CKT 1	124.4	0.05978	106.5893	HESKETT - MANDAN 4 230.00 230KV CKT 1	
25SP	16ALL		2 TO->FROM	G16_035	J316_SUB 230.00 - TATANKA 230KV CKT 1	341.6	0.072	136.7695	ELLENDLMVP4 230.00 - MERRCRT4 230.00 230KV CKT 1	
20SP	16ALL		2 TO->FROM	G16_035	J316_SUB 230.00 - TATANKA 230KV CKT 1	341.5	0.07182	133.3337	ELLENDLMVP4 230.00 - MERRCRT4 230.00 230KV CKT 1	

SEASON	GROUP	SCENARIO	DIRECTION	SOURCE	MONITORED ELEMENT	RATE		CONTINGENCY		CONTINGENCY
						(MVA)	TDF	LOADING %		
20WP	16ALL		2 TO->FROM	G16_035	J316_SUB 230.00 - TATANKA 230KV CKT 1	342.1	0.07072	122.8468	ELLENDLMVP4 230.00 - MERRCRT4 230.00 230KV CKT 1	
20L	16ALL		2 TO->FROM	G16_035	J316_SUB 230.00 - TATANKA 230KV CKT 1	342.4	0.06789	108.6207	ELLENDLMVP4 230.00 - MERRCRT4 230.00 230KV CKT 1	
17G	16ALL		2 TO->FROM	G16_035	J316_SUB 230.00 - TATANKA 230KV CKT 1	342.9	0.05328	101.6028	ELLEDALE - MERRCRT4 230.00 230KV CKT 1	
17SP	16ALL		2 TO->FROM	G16_035	J316_SUB 230.00 - TATANKA 230KV CKT 1	343	0.05424	101.124	ELLEDALE - MERRCRT4 230.00 230KV CKT 1	
17SP	16ALL		2 TO->FROM	G16_035	KARLSTAD - WINGER 230KV CKT 1	286.4	0.04575	121.0535	RIEL - ROSEAU 500KV CKT 1	
17SP	16ALL		2 TO->FROM	G16_035	KARLSTAD - WINGER 230KV CKT 1	286.4	0.04575	119.622	ROSEAU - ROSEAU 2 500.00 500KV CKT 1	
17SP	16ALL		2 TO->FROM	G16_035	KARLSTAD - WINGER 230KV CKT 1	286.4	0.04575	119.622	ROSEAU - ROSEAU 2 500.00 500KV CKT 1	
20SP	16ALL		2 TO->FROM	G16_035	KARLSTAD - WINGER 230KV CKT 1	285.7	0.0428	118.6157	RIEL - ROSEAU 500KV CKT 1	
17SP	16ALL		2 TO->FROM	G16_035	KARLSTAD - WINGER 230KV CKT 1	286.4	0.04575	118.1555	FORBES - ROSEAU 500KV CKT 1	
20SP	16ALL		2 TO->FROM	G16_035	KARLSTAD - WINGER 230KV CKT 1	285.7	0.0428	117.2506	ROSEAU - ROSEAU 2 500.00 500KV CKT 1	
20SP	16ALL		2 TO->FROM	G16_035	KARLSTAD - WINGER 230KV CKT 1	285.7	0.0428	117.2506	ROSEAU - ROSEAU 2 500.00 500KV CKT 1	
20SP	16ALL		2 TO->FROM	G16_035	KARLSTAD - WINGER 230KV CKT 1	285.7	0.0428	115.8156	FORBES - ROSEAU 500KV CKT 1	
25SP	16ALL		2 TO->FROM	G16_035	KARLSTAD - WINGER 230KV CKT 1	285.6	0.04382	112.8881	RIEL - ROSEAU 500KV CKT 1	
25SP	16ALL		2 TO->FROM	G16_035	KARLSTAD - WINGER 230KV CKT 1	285.6	0.04382	111.5576	ROSEAU - ROSEAU 2 500.00 500KV CKT 1	
25SP	16ALL		2 TO->FROM	G16_035	KARLSTAD - WINGER 230KV CKT 1	285.6	0.04382	111.5576	ROSEAU - ROSEAU 2 500.00 500KV CKT 1	
25SP	16ALL		2 TO->FROM	G16_035	KARLSTAD - WINGER 230KV CKT 1	285.6	0.04382	110.192	FORBES - ROSEAU 500KV CKT 1	
17G	16ALL		2 TO->FROM	G16_035	KARLSTAD - WINGER 230KV CKT 1	285.4	0.04538	109.5856	RIEL - ROSEAU 500KV CKT 1	
17G	16ALL		2 TO->FROM	G16_035	KARLSTAD - WINGER 230KV CKT 1	285.4	0.04538	108.6045	ROSEAU - ROSEAU 2 500.00 500KV CKT 1	
17G	16ALL		2 TO->FROM	G16_035	KARLSTAD - WINGER 230KV CKT 1	285.4	0.04538	108.6045	ROSEAU - ROSEAU 2 500.00 500KV CKT 1	
17G	16ALL		2 TO->FROM	G16_035	KARLSTAD - WINGER 230KV CKT 1	285.4	0.04538	107.6584	FORBES - ROSEAU 500KV CKT 1	
17SP	16ALL		2 FROM->TO	G16_035	PRAIRIE - WINGER 230KV CKT 1	400	0.04752	120.3193	RIEL - ROSEAU 500KV CKT 1	
20SP	16ALL		2 FROM->TO	G16_035	PRAIRIE - WINGER 230KV CKT 1	400	0.04606	118.9959	RIEL - ROSEAU 500KV CKT 1	
17SP	16ALL		2 FROM->TO	G16_035	PRAIRIE - WINGER 230KV CKT 1	400	0.04752	118.8193	ROSEAU - ROSEAU 2 500.00 500KV CKT 1	
17SP	16ALL		2 FROM->TO	G16_035	PRAIRIE - WINGER 230KV CKT 1	400	0.04752	118.8193	ROSEAU - ROSEAU 2 500.00 500KV CKT 1	
20SP	16ALL		2 FROM->TO	G16_035	PRAIRIE - WINGER 230KV CKT 1	400	0.04606	117.4959	ROSEAU - ROSEAU 2 500.00 500KV CKT 1	
20SP	16ALL		2 FROM->TO	G16_035	PRAIRIE - WINGER 230KV CKT 1	400	0.04606	117.4959	ROSEAU - ROSEAU 2 500.00 500KV CKT 1	
17SP	16ALL		2 FROM->TO	G16_035	PRAIRIE - WINGER 230KV CKT 1	400	0.04752	117.2443	FORBES - ROSEAU 500KV CKT 1	
20SP	16ALL		2 FROM->TO	G16_035	PRAIRIE - WINGER 230KV CKT 1	400	0.04606	115.9959	FORBES - ROSEAU 500KV CKT 1	
25SP	16ALL		2 FROM->TO	G16_035	PRAIRIE - WINGER 230KV CKT 1	399.9	0.04418	113.8302	RIEL - ROSEAU 500KV CKT 1	
25SP	16ALL		2 FROM->TO	G16_035	PRAIRIE - WINGER 230KV CKT 1	399.9	0.04418	112.5799	ROSEAU - ROSEAU 2 500.00 500KV CKT 1	
25SP	16ALL		2 FROM->TO	G16_035	PRAIRIE - WINGER 230KV CKT 1	399.9	0.04418	112.5799	ROSEAU - ROSEAU 2 500.00 500KV CKT 1	
25SP	16ALL		2 FROM->TO	G16_035	PRAIRIE - WINGER 230KV CKT 1	399.9	0.04418	111.3046	FORBES - ROSEAU 500KV CKT 1	
17G	16ALL		2 FROM->TO	G16_035	PRAIRIE - WINGER 230KV CKT 1	399.8	0.04695	102.8409	RIEL - ROSEAU 500KV CKT 1	
17G	16ALL		2 FROM->TO	G16_035	PRAIRIE - WINGER 230KV CKT 1	399.8	0.04695	101.8404	ROSEAU - ROSEAU 2 500.00 500KV CKT 1	
17G	16ALL		2 FROM->TO	G16_035	PRAIRIE - WINGER 230KV CKT 1	399.8	0.04695	101.8404	ROSEAU - ROSEAU 2 500.00 500KV CKT 1	
17G	16ALL		2 FROM->TO	G16_035	PRAIRIE - WINGER 230KV CKT 1	399.8	0.04695	100.8399	FORBES - ROSEAU 500KV CKT 1	
20SP	16ALL		2 TO->FROM	G16_035	SPLIT ROCK - WHITE 345KV CKT 1	713.7	0.12668	126.6579	BROOKING COUNTY - LYON COUNTY 345KV CKT 1	
25SP	16ALL		2 TO->FROM	G16_035	SPLIT ROCK - WHITE 345KV CKT 1	714.1	0.12753	125.8112	BROOKING COUNTY - LYON COUNTY 345KV CKT 1	
20WP	16ALL		2 TO->FROM	G16_035	SPLIT ROCK - WHITE 345KV CKT 1	713.7	0.12196	111.145	BROOKING COUNTY - LYON COUNTY 345KV CKT 1	
20SP	16ALL		2 TO->FROM	G16_035	SPLIT ROCK - WHITE 345KV CKT 1	713.7	0.13001	109.7466	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT	
20SP	16ALL		2 TO->FROM	G16_035	SPLIT ROCK - WHITE 345KV CKT 1	713.7	0.11487	109.4235	FORBES - ROSEAU 500KV CKT 1	
20SP	16ALL		2 TO->FROM	G16_035	SPLIT ROCK - WHITE 345KV CKT 1	713.7	0.13345	109.4149	G16-017-TAP 345.00 - G16035-TAPII345.00 345KV CKT 1	
20SP	16ALL		2 TO->FROM	G16_035	SPLIT ROCK - WHITE 345KV CKT 1	713.7	0.13345	109.3869	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z	
20SP	16ALL		2 TO->FROM	G16_035	SPLIT ROCK - WHITE 345KV CKT 1	713.7	0.13345	109.3869	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1	
17SP	16ALL		2 TO->FROM	G16_035	SPLIT ROCK - WHITE 345KV CKT 1	714.3	0.1058	109.2731	BROOKING COUNTY - LYON COUNTY 345KV CKT 1	
20SP	16ALL		2 TO->FROM	G16_035	SPLIT ROCK - WHITE 345KV CKT 1	713.7	0.1179	109.2462	RIEL - ROSEAU 500KV CKT 1	
20SP	16ALL		2 TO->FROM	G16_035	SPLIT ROCK - WHITE 345KV CKT 1	713.7	0.1179	109.064	ROSEAU - ROSEAU 2 500.00 500KV CKT 1	
20SP	16ALL		2 TO->FROM	G16_035	SPLIT ROCK - WHITE 345KV CKT 1	713.7	0.1179	109.064	ROSEAU - ROSEAU 2 500.00 500KV CKT 1	
20SP	16ALL		2 TO->FROM	G16_035	SPLIT ROCK - WHITE 345KV CKT 1	713.7	0.1179	108.8679	FORBES - ROSEAU 500KV CKT 1	
20SP	16ALL		2 TO->FROM	G16_035	SPLIT ROCK - WHITE 345KV CKT 1	713.7	0.12609	108.5722	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	
20SP	16ALL		2 TO->FROM	G16_035	SPLIT ROCK - WHITE 345KV CKT 1	713.7	0.12609	108.5442	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	
20SP	16ALL		2 TO->FROM	G16_035	SPLIT ROCK - WHITE 345KV CKT 1	713.7	0.12019	108.1588	HANLON - STORLA 230KV CKT 1	
25SP	16ALL		2 TO->FROM	G16_035	SPLIT ROCK - WHITE 345KV CKT 1	714.1	0.13077	108.0592	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT	
20SP	16ALL		2 TO->FROM	G16_035	SPLIT ROCK - WHITE 345KV CKT 1	713.7	0.12008	107.9358	P12:230:UMZB:# 116 #: ST IN SD. WSG-ST-VH	
20SP	16ALL		2 TO->FROM	G16_035	SPLIT ROCK - WHITE 345KV CKT 1	713.7	0.11487	107.8262	P12:161:OPPD:S1209-S1231 CKT 1	

SEASON	GROUP	SCENARIO	DIRECTION	SOURCE	MONITORED ELEMENT	RATE		CONTINGENCY		CONTINGENCY
						(MVA)	TDF	LOADING %		
20SP	16ALL	2	TO->FROM	G16_035	SPLIT ROCK - WHITE 345KV CKT 1	713.7	0.12609	107.7595	FT THOMPSON - FTTHOM2-LNX3345.00 345KV CKT Z	
25SP	16ALL	2	TO->FROM	G16_035	SPLIT ROCK - WHITE 345KV CKT 1	714.1	0.13421	107.7125	G16-017-TAP 345.00 - G16035-TAPII345.00 345KV CKT 1	
25SP	16ALL	2	TO->FROM	G16_035	SPLIT ROCK - WHITE 345KV CKT 1	714.1	0.13421	107.6845	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z	
25SP	16ALL	2	TO->FROM	G16_035	SPLIT ROCK - WHITE 345KV CKT 1	714.1	0.13421	107.6845	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1	
20SP	16ALL	2	TO->FROM	G16_035	SPLIT ROCK - WHITE 345KV CKT 1	713.7	0.12609	107.6474	FTTHOM2-LNX3345.00 - GRPRAR2-LNX3345.00 345KV CKT 1	
20SP	16ALL	2	TO->FROM	G16_035	SPLIT ROCK - WHITE 345KV CKT 1	713.7	0.12609	107.6474	GRPRAR2-LNX3345.00 - YANKTON 345KV CKT Z	
25SP	16ALL	2	TO->FROM	G16_035	SPLIT ROCK - WHITE 345KV CKT 1	714.1	0.1156	107.4384	P12:230:UMZW:# 739 #: FT IN SD. FT-LP LINE FAULT	
20SP	16ALL	2	TO->FROM	G16_035	SPLIT ROCK - WHITE 345KV CKT 1	713.7	0.11487	107.2517	LARAMIE RIVER 345/24.0KV TRANSFORMER CKT 1	
20SP	16ALL	2	TO->FROM	G16_035	SPLIT ROCK - WHITE 345KV CKT 1	713.7	0.11487	107.2237	RAUN 345/24.0KV TRANSFORMER CKT 1	
25SP	16ALL	2	TO->FROM	G16_035	SPLIT ROCK - WHITE 345KV CKT 1	714.1	0.11865	107.1504	RIEL - ROSEAU 500KV CKT 1	
25SP	16ALL	2	TO->FROM	G16_035	SPLIT ROCK - WHITE 345KV CKT 1	714.1	0.11865	106.9824	ROSEAU - ROSEAUM 2 500.00 500KV CKT 1	
25SP	16ALL	2	TO->FROM	G16_035	SPLIT ROCK - WHITE 345KV CKT 1	714.1	0.11865	106.9824	ROSEAU - ROSEAUM 2 500.00 500KV CKT 1	
25SP	16ALL	2	TO->FROM	G16_035	SPLIT ROCK - WHITE 345KV CKT 1	714.1	0.12687	106.8879	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	
25SP	16ALL	2	TO->FROM	G16_035	SPLIT ROCK - WHITE 345KV CKT 1	714.1	0.12687	106.8459	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	
25SP	16ALL	2	TO->FROM	G16_035	SPLIT ROCK - WHITE 345KV CKT 1	714.1	0.11865	106.8143	FORBES - ROSEAU 500KV CKT 1	
25SP	16ALL	2	TO->FROM	G16_035	SPLIT ROCK - WHITE 345KV CKT 1	714.1	0.12097	106.3487	HANLON - STORLA 230KV CKT 1	
25SP	16ALL	2	TO->FROM	G16_035	SPLIT ROCK - WHITE 345KV CKT 1	714.1	0.12086	106.1247	P12:230:UMZB:# 116 #: ST IN SD. WSG-ST-VH	
25SP	16ALL	2	TO->FROM	G16_035	SPLIT ROCK - WHITE 345KV CKT 1	714.1	0.12687	106.0757	FT THOMPSON - FTTHOM2-LNX3345.00 345KV CKT Z	
25SP	16ALL	2	TO->FROM	G16_035	SPLIT ROCK - WHITE 345KV CKT 1	714.1	0.12687	105.9637	FTTHOM2-LNX3345.00 - GRPRAR2-LNX3345.00 345KV CKT 1	
25SP	16ALL	2	TO->FROM	G16_035	SPLIT ROCK - WHITE 345KV CKT 1	714.1	0.12687	105.9637	GRPRAR2-LNX3345.00 - YANKTON 345KV CKT Z	
25SP	16ALL	2	TO->FROM	G16_035	SPLIT ROCK - WHITE 345KV CKT 1	714.1	0.1156	105.8	P12:230:UMZB:# 116 #: ST IN SD. WSG-ST-VH	
25SP	16ALL	2	TO->FROM	G16_035	SPLIT ROCK - WHITE 345KV CKT 1	714.1	0.1156	105.3379	RAUN 345/24.0KV TRANSFORMER CKT 1	
25SP	16ALL	2	TO->FROM	G16_035	SPLIT ROCK - WHITE 345KV CKT 1	714.1	0.1156	105.2959	RAUN 345/24.0KV TRANSFORMER CKT 1	
20L	16ALL	2	TO->FROM	G16_035	SPLIT ROCK - WHITE 345KV CKT 1	713.1	0.12166	102.407	BROOKING COUNTY - LYON COUNTY 345KV CKT 1	
17SP	16ALL	2	TO->FROM	G16_035	SPLIT ROCK - WHITE 345KV CKT 1	714.3	0.11771	101.0655	LAKEFIELD 3 - LKFLDXL3 345KV CKT 1	
20SP	15ALL	0	TO->FROM	G16_036	SPLIT ROCK - WHITE 345KV CKT 1	713.4	0.1486	102.5844	BROOKING COUNTY - LYON COUNTY 345KV CKT 1	
25SP	15ALL	0	TO->FROM	G16_036	SPLIT ROCK - WHITE 345KV CKT 1	713.5	0.14941	101.3587	BROOKING COUNTY - LYON COUNTY 345KV CKT 1	